

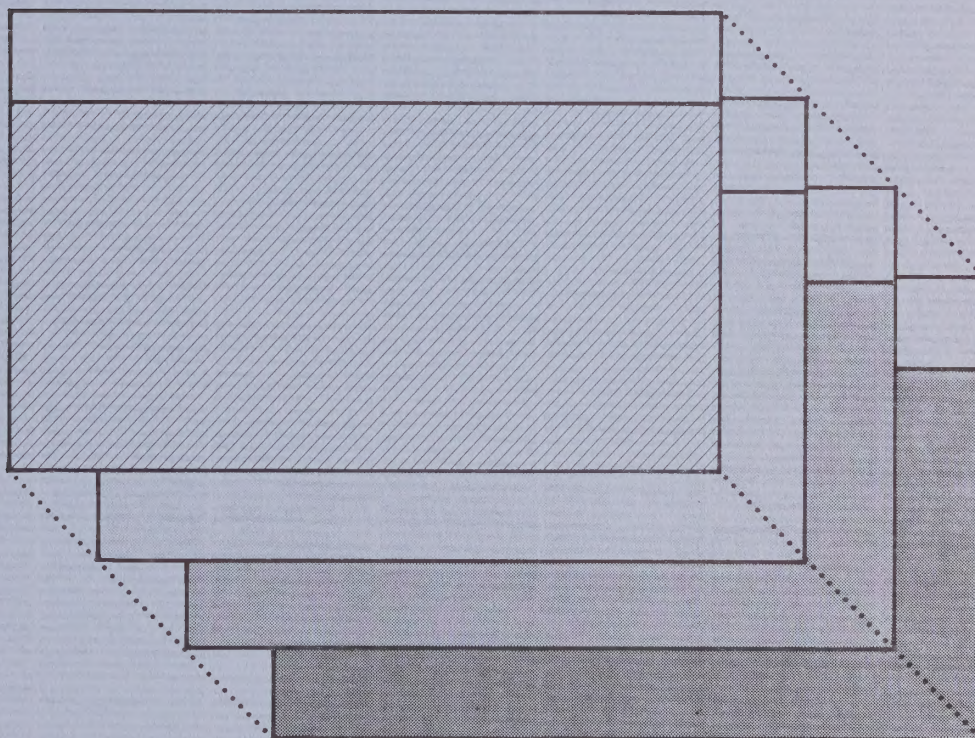
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ENVIRONMENTAL
MANAGEMENT
PLAN
FOR THE
SAN FRANCISCO
BAY REGION

D R A F T

Solid Waste Management Plan



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ENVIRONMENTAL MANAGEMENT PLAN

FOR


SAN FRANCISCO BAY REGION

DRAFT SOLID WASTE MANAGEMENT PLAN

OCTOBER 12, 1977

*Refuse and refuse disposal -- CA --
San Francisco metro area*

Association of Bay Area Governments



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Chapter—1

Purpose of this document

This document is one of twelve draft management plans prepared as part of the Environmental Management Program for the San Francisco Bay Region. The draft management plans to be published during September and October, 1977 are:

- Air quality maintenance plan
- Water quality management plan
- 8 countywide surface runoff control plans
- Water conservation, reuse and supply management plan
- Solid waste management plan

At this stage the plans are not in final form. The draft plans are intended to stimulate public discussion of environmental quality in the Bay Region. Comments received will be used to assist in preparing the draft integrated Environmental Management Plan (EMP) to be published in December, 1977.

Chapter—2

Summary

This draft solid waste management plan describes a physical system for managing the Bay Area solid wastes. It also provides a regional approach for solving the Bay Area's basic solid waste management problem: the problem that we are burying most of our wastes in landfills instead of conserving and recovering materials and energy from wastes.

The plan is built upon work in progress or completed by other agencies. The emphasis is on:

- Improvement of existing system of landfilling wastes to ensure public health and safety, to protect environmental quality, and to conserve resources.
- Support of research and demonstration projects to obtain additional information needed for large-scale resource recovery planning.
- Advocacy of Federal and State action to support waste reduction and materials and energy recovery.

The plan recommends that the nine Bay Area county solid waste management plans and programs through 1980 be carried out as part of the regional solid waste management plan. The county programs basically involve continuation of the present practice of collection and disposal of wastes at landfills. To reduce the disposal problem and resource depletion effects of solid waste, the plan also calls for action at all levels of government and the private sector to develop more effective programs of waste reduction and separation and recovery of reusable materials where feasible. Some of the recommended actions include:

- Develop education programs to help the public understand solid waste problems and become involved in their solutions, such as reducing the use of products that cannot be recycled.
- Develop additional source separation programs.
- Develop dependable markets for recovered materials.
- Initiate legislative and administrative changes where appropriate to improve the competitive position of secondary materials and products containing secondary materials.

The plan also includes the following recommended actions:

- Accelerate the adoption and updating of the Waste Discharge Requirements for water quality protection and issuance of operating permits for all landfill disposal sites.
- Streamline the process of obtaining permits for new or expanded solid waste facilities and disposal sites.
- Enforce requirements for existing hazardous waste handling, transportation and disposal practices.

- Conduct surveys of hazardous industrial wastes and hospital wastes on a county-by-county basis.
- Encourage reduction, source separation, and recovery of hazardous wastes and determine the need for additional disposal site capacity.
- Construct facilities for processing, handling, and disposal of wastewater solids (sewage sludge).

In terms of continuing planning, the plan affirms the authority of county agencies to plan for future problems at the local level and to implement new programs for material and energy recovery. The plan also recommends that, pursuant to Chapter 689 of the Statutes of 1977, ABAG lead the planning effort for regional problems.

Costs that result directly from plan implementation are estimated to be \$850,000 annually. These are primarily administrative and regulatory costs of the State, regional and local public agencies, and most will come from existing state and local programs.

The plan will not result in significant changes in the next few years, but the programs set up by the plan could eventually have significant effects on all of us. It could, for example:

- Change household practices, such as separating waste into reusable and non-reusable parts, and using things more than once before throwing them away.
- Change buying habits, such as purchasing more durable items and products that are not hard to dispose of.
- Change the amount of packaging on things we buy, and
- Change some of the materials products are made of.

A more detailed description of the plan recommendations is in Table 6 in the back of this document.

Chapter—3

Background

1) Goals and Objectives

The goal of the solid waste management plan is the same as the goal for the entire Environmental Management Program, namely, to produce a plan with the following characteristics:

- It will lead to the greatest possible improvement in water and air quality and problems caused by solid waste, and will lead to compliance with Federal and State standards and objectives at the earliest possible date.
- It will not have social, economic, or environmental effects so unacceptable as to prevent implementation.

Specific objectives included in the plan recommendations are:

- To ensure adequate solid waste management and planning for the region.
- To support management of municipal wastes, hazardous wastes, and wastewater solids at all levels of government that ensures public health and safety, protects environmental quality, and conserves resources.
- To ensure that the disposal of solid waste on land is adequately controlled in order to protect surface and ground water quality, as well as public health and safety.
- To ensure that applications for new solid waste management facilities (including resource recovery facilities) and disposal sites are efficiently and fairly processed through streamlining of permit procedures and coordination of the involved regulatory and commenting agencies wherever possible.
- To promote reduction of quantities of municipal wastes at the source of generation.
- To improve markets for secondary materials.
- To promote establishment of low-cost, low-technology systems and to coordinate these with appropriate back-end resource recovery programs.

2) Legal Mandates

The solid waste management plan is consistent with the following Federal and State laws:

- The Federal Water Pollution Control Act Amendments of 1972
(Section 208, Public Law 92-500)

This act requires the 208 plan to:

- identify the necessary controls to be established over the disposal of pollutants on land or in subsurface excavations to protect ground and surface water quality, and
- describe the proposed action necessary to achieve such controls.

- The Resource Conservation and Recovery Act of 1976 (RCRA)
(Public Law 94-580)

This act provides technical and financial assistance for:

- the development of management plans and facilities for the recovery of energy and other resources from discarded materials.
- the safe disposal of discarded materials, and
- regulating the management of hazardous wastes.

- The California Solid Waste Management and Resource Recovery Act of 1972 (SB 5).

This act creates the State Solid Waste Management Board (SSWMB) and requires each county to prepare and implement a comprehensive, coordinated solid waste management plan for all wastes generated and disposed of within the county.

Each plan must be approved by a majority of the cities in that county which represent a majority of the population in the incorporated areas. The plans must then be approved by the SSWMB. Thereafter, solid waste management activities at the local level must be consistent with the approved plans.

- The Planning Guidelines for the Preparation of County Solid Waste Management Plans. (Section 17176, Division 7, Title 14, California Administrative Code)

The guidelines state that it is the declared intent of the State Solid Waste Management Board to reduce total dependency on conventional disposal methods such as landfills and to maximize solid waste resource recovery.

- Section 66780.5 of the California Government Code (SB 424) - 1977

This section of the Government Code requires that a regional solid waste management plan shall be prepared and updated by ABAG for the San Francisco Bay Area.

The regional plan, and subsequent amendments shall be submitted to the General Assembly of ABAG. Once approved in such assembly by a majority of the counties representing a majority of

the population of the San Francisco Bay Area, and in such assembly by a majority of the cities representing a majority of the population of incorporated areas in the San Francisco Bay Area, the regional plan shall be submitted to the State Solid Waste Management Board for approval. Submission of the initial plan shall be made in April 1978, together with the areawide waste treatment management plan to be submitted to the State Water Resources Control Board and the air quality maintenance plan to be submitted to the State Air Resources Board. Hazardous waste policies and programs of the regional plan shall be submitted to the State Department of Health for approval. The regional plan shall, upon approval by the State Solid Waste Management Board and the State Department of Health, become part of the state plan to meet the requirements of the Federal Resource Conservation and Recovery Act of 1976. (See Appendix 1.)

3) Previous and Concurrent Planning and Programs

- Mandated countywide solid waste management plans prepared by each of the nine Bay Area counties in cooperation with their cities. (See Table 4.)

These plans provide for the management of all waste generated and disposed of within the county and include:

- detailed implementation program to 1980, and
 - intergovernmental arrangements for implementation, enforcement, and continuing planning.
- The Bay Area Solid Waste Management Project, being conducted by the State Solid Waste Management Board.

Phase I, completed December 1976, was to:

- identify, assemble and evaluate the relevant data on all solid waste generation, processing and disposal activities in the Bay Area, and
- determine the relative environmental, economic and social impact of alternative systems, or combinations of systems, for managing the Bay Area's solid waste.

In Phase II, now underway, the State Solid Waste Management Board proposes to begin implementing large-scale resource recovery projects in the Bay Area. Two feasibility studies for waste-to-energy projects--in San Francisco and the City of Alameda--have been funded by the State Board, and others are under consideration. The Cities of El Cerrito and Santa Rosa have received State funds for separate collection and recycling demonstration projects.

- The Group 1 wastes (hazardous) -- Class I Sites Study, conducted by the State Solid Waste Management Board, the State Department of Health and the State Water Resources Control Board pursuant to a concurrent resolution of the Legislature.

This study, completed in August 1976, made recommendations to the Legislature on:

- the need for hazardous waste disposal sites, and
 - the role of the State in ensuring environmentally sound handling of such wastes.
- The San Francisco Bay Region Wastewater Solids Study, being conducted by East Bay Municipal Utility District as lead agency for a consortium of wastewater dischargers in the Bay Area.

This program will result in a regional plan including policies, for long-term municipal wastewater solids management needs in the nine-county San Francisco Bay Area.

4) How the Plan Was Prepared

Steps in plan preparation included:

- Review of results of current studies and programs of other agencies.
- Preparation of technical memoranda and briefs summarizing the findings of further staff investigations.
- Development of the plan and recommendations based on the results of the current studies and the technical memoranda listed below:
 1. "Status of Existing Landfill Sites in the San Francisco Bay Region," March 28, 1977.
 2. "Existing Authorities for Hazardous Waste Management," June 13, 1977.
 3. "Action Program to Reduce Waste Generation and to Promote Source Separation and Recycling in the Bay Area," April 18, 1977.
 4. "Issues in Current Permit Approval System for Solid Waste Management Facilities and Disposal Sites," April 18, 1977.
 5. "Existing Practices for Hazardous Waste Management in the San Francisco Bay Area," June 13, 1977.
 6. "Current and Projected Quantities of Hazardous Industrial Wastes Produced in the San Francisco Bay Area," June 13, 1977.
 7. "Identification of Possible Class I Site Areas," July 31, 1977.
 8. "Elements of a Coordinated Permit Approval Process for Solid Waste Management Sites and Facilities," July 27, 1977.
 9. "Issues for Federal and State Legislative and Administrative Action to Promote Source Reduction and Resource Recovery from Solid Waste," August 11, 1977.

In the course of plan development, the Environmental Management Task Force has given policy guidance. Staff progress has been reviewed and commented upon by the Solid Waste Advisory Committee, which includes representatives from public agencies, private industries, special interest groups, and concerned citizens.

It should be noted that the work program and budget was not designed to produce a fully developed solid waste management plan. In general, it has less detail than the air and water quality portions of the Environmental Management Plan. Many of the solid waste issues are not fully examined, but will be considered in the continuing planning process after the approval of the initial Environmental Management Plan and as additional information becomes available. However, certain activities, such as the identification of potential hazardous waste disposal site areas, which are part of the continuing planning process, are already underway through contracts between ABAG and the State Solid Waste Management Board.

The solid waste problem

"Solid waste" means any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities.

The basic solid waste management problem in the Bay Area is that we are burying most of our wastes in landfills instead of conserving and recovering materials and energy from wastes. While landfilling of solid waste has been the easiest and cheapest method of waste disposal in the past, it will become more and more expensive as existing landfills close and new sites must be located at greater distances.

Tables 1 and 2 summarize the estimated solid waste quantities generated in the Bay Area in 1975, 1980, and 1990.

Table—1 Summary of estimated solid waste quantities generated in the Bay Area (1975-1990)

WASTE TYPE	QUANTITIES, 1000 tons/year		
	1975	1980	1990
<u>Municipal Wastes^a</u>			
Residential	2100	2400	3000
Commercial	1500	1700	2100
Industrial (non-manufacturing)	650	740	890
Uncollected	150	170	200
Construction/Demolition	1300	1300	1400
Litter/Street Sweeping	150	180	250
Food Processing	250	420	640
	<u>6100</u>	<u>6910</u>	<u>8480</u>
<u>Hazardous Wastes^b</u>	820	1050	1700
<u>Wastewater Solids (Sewage Sludge)^c</u>	450	1060	1180
<u>Agricultural Wastes^a</u>	<u>4200</u>	<u>4200</u>	<u>4200</u>
TOTAL	11500	13000	15500

^aQuantities estimated by the State Solid Waste Management Board in the Bay Area Solid Waste Management Project-Phase I Report, February 1977.

^bRough quantities estimated by the Association of Bay Area Governments based on the Technical Memorandum entitled, Current and Projected Quantities of Hazardous Industrial Wastes Produced in the San Francisco Bay Area June, 1977.

^cQuantities estimated by the Wastewater Solids Study.

Table—2
Summary of estimated solid waste
quantities in each county (1975-1990)

COUNTY	YEAR	SOLID WASTE ^a								HAZARDOUS WASTE ^c	WASTEWATER ^d	AGRICULTURAL WASTES ^e	TOTAL ^d
		RESIDENTIAL	COMMERCIAL	NON-MANUFACTURING INDUSTRIAL ^f	MANUFACTURING ^g	CONSTRUCTION ^h	LITTER/DEBRIS ⁱ	FOOD ^j	SUBTOTAL				
Alameda	1975	490	377	216	f	g	q	78	1161	109	88	125	1483
	1980	530	423	238	f	g	q	g	1269	140	166	g	1703
	1990	660	497	289	f	g	g	g	1524	226	175	g	2050
Contra Costa	1975	203	146	78	39	104	2.6	i	610	413	38	222	1283
	1980	230	160	81	42	113	2.8	q	667	529	191	217	1604
	1990	286	187	95	48	127	3.6	q	785	857	242	208	2092
Marin	1975	98	98	9	f	17	5.5	h	228	1	12	601	842 ²
	1980	117	117	10	f	19	7.0	h	270	1	13	601	885
	1990	158	158	11	f	24	9.0	h	360	2	14	601	977
Napa	1975	25	25	f	f	4	h	8	62	0	2	2	66
	1980	26	27	f	f	6	h	8	65	0	28	2	96
	1990	29	29	f	f	7	h	8	73	0	34	2	109
San Francisco	1975	270	208	f	f	650	27	q	1155	17	93	2	1227
	1980	290	227	f	f	650	32	q	1199	22	124	2	1347
	1990	323	265	f	f	650	33	q	1271	36	132	2	1441
San Mateo	1975	270	279	95	f	156	45	5	828	35	55	44	963
	1980	297	308	100	f	156	46	5	906	44	140	44	1134
	1990	360	372	110	f	182	50	5	1079	72	144	44	1339
Santa Clara	1975	562	218	252	114	312	30	158	1426	76	168	198	2068
	1980	650	251	294	125	343	q	q	1851	97	265	163	2376
	1990	856	327	366	149	406	q	q	2291	157	292	150	2890
Solano	1975	87	72	15	f	13	21	16	224	158	8	775	1165
	1980	103	81	19	f	16	25	192	442	203	74	814	1533
	1990	161	141	21	f	27	41	223	614	328	93	862	1898
Sonoma	1975	90	91	f	f	20	5.8	h	204	11	24	2231	2474
	1980	107	107	f	f	25	8	h	245	14	55	g	2545
	1990	120	119	f	f	27	9	h	275	22	55	g	2583
TOTAL ^d	1975	2100	1500	650	150	1300	150	250	6100	820	450	4200	11500
	1980	2400	1700	740	170	1300	160	400	6900	1050	1055	4200	13000
	1990	3000	2100	890	200	1400	250	640	8500	1700	1180	4200	15500

^aQuantities estimated by the State Solid Waste Management Board based on County Solid Waste Management Plans, in the Bay Area Solid Waste Management Project - Phase I Report, February, 1977.

^bRough quantities estimated by ABAG. It was estimated that about half of these wastes generated would be disposed of at hazardous waste disposal sites (Class I sites). Tonnages shown are mostly in liquid form; residues requiring land burial after evaporation are a very small proportion of the liquid waste.

^cQuantities estimated by the San Francisco Bay Region Wastewater Solids Study (assuming 80% moisture content).

^dTotals have been estimated and rounded.

^eNon-manufacturing industrial wastes produced from activities not directly associated with production, such as office and shipping materials.

^fQuantities included in Residential, Commercial or Non-Manufacturing Industrial Categories.

^gQuantities not reported or estimated.

^hQuantities negligible.

ⁱTwo million gallons per day.

In 1975, the total quantity of solid waste generated in the Bay Area was about 11.5 million tons. Of this amount, about 4.2 million was agricultural waste (crop wastes and animal manures) that was generally returned to the soil. The remainder included 6.1 million tons of municipal wastes, 0.8 million tons of hazardous wastes and 450,000 tons of wastewater solids. Most of these wastes were disposed of in landfills and there has been a considerable amount of cross-county disposal. If the wastes had an average density of 500 pounds per cubic yard and were placed on a football field, a 15 yard layer would be created every day. At the end of the year, the field would be more than 3 miles high. The same amount of waste would also fill more than 27 skyscrapers the size of the Bank of America building in San Francisco--one every 13 days.

There are four major regional problems identified in the county solid waste management plans that are related to the basic problem of landfilling solid wastes. An areawide approach is necessary to find solutions to these regional problems.

1) Evaluation of Large-Scale Resource Recovery

Organic wastes comprise a large percentage of municipal wastes. Significant reduction of wastes going to landfills can be achieved through systems that recover resources from organic wastes. The county plans considered the known alternatives for processing these wastes: composting and chemical, biological and thermal treatment to produce energy.

Whereas the technology for composting is proven, the traditional market for compost as a soil conditioner is limited. Energy production by pyrolysis (a thermal process) was identified by several counties as the most attractive solution. However, the technology has not been completely proven beyond the pilot-scale. Environmental questions--the air quality effects vis-a-vis Bay Area Air Pollution Control District's regulations; water quality effects of incinerator residues and pyrolysis wastewater; and the costs of mitigating undesirable effects--remain to be answered.

In addition, the large-scale resource recovery facilities that are necessary for economic feasibility may require wastes from several jurisdictions. Solutions may require special or expensive facilities that would be costly for any one county to finance. Coordination of physical systems or administrative responsibilities may also be required.

2) Development of Dependable Markets for Recovered Materials

Significant reduction of wastes going to landfills can also be accomplished through manual separation of reusable materials at our homes and offices, or through mechanical separation after the wastes are collected.

However, the economic success of material recovery programs has been dependent on the availability of buyers offering stable prices for recovered goods. Throughout the Bay Area the lack of stable markets has been a major problem, particularly affecting local community-scale programs and also discouraging private industry from getting involved

in additional programs. There is a need to coordinate efforts of public agencies, citizen groups, private industry, and buyers of secondary goods in the region.

3) Assurance of Hazardous Wastes Disposal Capacity

Hazardous wastes include those wastes that are toxic, corrosive, flammable, irritants, and sensitizers. The State Water Resources Control Board classifies wastes in this category as Group 1 wastes and specifies that, if disposed of in landfills, they must go to disposal points which can accept these wastes without endangering water quality. There must be no possibility of discharge of pollutant substances to usable waters. There are currently three operating Class 1 sites in the Bay Area that receive hazardous wastes from Northern California.

Group 1 wastes have unique characteristics that make handling, hauling and disposal more difficult and more costly than Group 2 or 3 wastes (other municipal wastes). Also, the collection, hauling and disposal of these wastes are accomplished by different operators than the municipal refuse collectors. Apparently, illegal disposal of Group 1 wastes is a significant problem because of the high costs of such services and the lack of enforcement. Although many hazardous wastes could be recycled, there will continue to be a need for suitable disposal sites in the Region.

A hindrance to suggesting solutions to the problem is lack of information about the magnitude of the problem. Records of hazardous wastes transported by licensed haulers must be kept and submitted to the State Water Resources Control Board. These records account for only those hazardous wastes that are legally transported and disposed of. The total amounts generated are currently unknown.

4) Wastewater Solids Management Planning

Wastewater solids are by-products of wastewater treatment processes. Until recently, most of the wastewater treatment agencies in the Bay Area have provided for primary wastewater treatment. The traditional disposal systems have adequately handled the volume of solids produced. However, the Federal Water Pollution Control Act Amendments of 1972 mandated nationwide secondary treatment of all municipal wastewater by July 1, 1977. Consequently, solids removed from the wastewater will increase two to five fold. The immediate impact is an overloading of existing sludge processing and final disposal systems beyond their present capabilities.

Table 3 summarizes the four major regional problems and a number of secondary problems.

Table—3

Regional solid waste problems

TYPE OF PROBLEMS	MUNICIPAL WASTE	HAZARDOUS WASTE	WASTEWATER SOLIDS
Waste Production	<ul style="list-style-type: none"> o Accurate estimates of the amount of municipal waste cannot be made because of present data limitations. There are no statewide standards covering measuring of wastes and data collection, recording, and reporting. 	<ul style="list-style-type: none"> o Accurate estimates of the amount of hazardous waste cannot be made because of present data limitations. 	<ul style="list-style-type: none"> o Clean water, in the Bay and its tributaries, a goal desired by everyone, results in more wastewater solids or "sludge" as municipalities and industries achieve higher levels of wastewater treatment.
Waste Handling	<ul style="list-style-type: none"> o Existing waste handling practices are sometimes inadequate, and better enforcement of the State minimum standards is necessary. o Applications for new solid waste management facilities and disposal sites may not always be efficiently and fairly processed; coordination of the involved regulatory and commenting agencies is needed. 	<ul style="list-style-type: none"> o Wastes may be stored and transported improperly. o Coordination in handling spills of dangerous materials is often inadequate. o Enforcement of hazardous waste management operations is inadequate, because of lack of funding and personnel. 	<ul style="list-style-type: none"> o The cost of sludge processing, transport, and disposal/use is high and can be as much as one half of the operation cost of many wastewater treatment systems. o Local planning for wastewater solids management generally addresses immediate needs, is not coordinated throughout the region, and may not be cost-effective or environmentally sound on a regional level. o Firm strategy and long-range policy regarding wastewater solids management are not well defined in existing regional and subregional wastewater and municipal solid waste planning efforts.
Waste Reduction and Recovery	<ul style="list-style-type: none"> o Throughout the Bay Area, the lack of stable markets has affected community-scale recycling programs and also discouraged private industry from getting involved in additional activities such as collection of source separated materials. Future economic success of materials recovery programs will depend on the availability of buyers offering stable prices for recovered goods and competitive prices for products made of recycled materials. o Large-scale energy production from solid wastes is costly, the technology has not been proven beyond the pilot-scale, and there are outstanding questions on the environmental effects. o Continuing public education programs on waste reduction and resource recovery are needed. o State and Federal governments have not actively promoted waste reduction and resource recovery. 	<ul style="list-style-type: none"> o Existing housekeeping practices and economic considerations may lead to mixing of wastes and make them more difficult to reclaim, especially in smaller plants. o Hazardous waste recovery equipment can be very expensive and highly specialized. Having wastes hauled to disposal sites can be more convenient and is often cheaper. o Waste producers are often unaware of other waste recovery alternatives such as waste exchange. o Incentives for resource recovery are lacking. 	<ul style="list-style-type: none"> o Production of a dried sludge for soil conditioner or fertilizer purposes is technologically feasible, but competition from inorganic fertilizers limits the economic potential of this operation. o Spreading liquid sludge on the surface of agricultural lands and using dried sludge for solid conditioner or fertilizer could offer a means to recycle sludge for beneficial uses, but the State Department of Health regulations may eliminate such options.
Waste Disposal	<ul style="list-style-type: none"> o Since many of the existing disposal sites will be completely filled in less than ten years, new disposal sites or disposal methods have to be developed in the near future. o The location of past and present solid waste disposal sites in close proximity to the Bay-Delta ground and surface waters, in some cases, has resulted in impairment of water quality. o Adoption or revision of Waste Discharge Requirements by the State Regional Water Quality Control Board, San Francisco Bay Region is still needed for about 29 of the active landfill sites. 	<ul style="list-style-type: none"> o Some infectious and pathological hospital wastes are disposed of at Class II sites with general household refuse. o No determination of the need for additional hazardous waste disposal sites can be made until better information is available on quantities and the potential extent of resource recovery. o Agreement among local governments and private industry is needed to ensure adequate land disposal capacity for the region's hazardous wastes. 	<ul style="list-style-type: none"> o Landfill and lagoons have been the most common disposal methods for processed sludge, but these methods sometimes caused environmental and nuisance problems. o Continuing the practice of landfilling sludge will accelerate the filling of existing disposal sites which is already a critical problem for the disposal of municipal refuse. o Technology for energy recovery systems for co-disposal of refuse and wastewater treatment sludges has not been completely proven.

Environmental effects caused by the solid waste problems include:

1) Impairment of Air and Water Quality

Pollutants from inadequately controlled solid waste disposal sites can flow through and over the wastes to contaminate ground and surface waters. Past and present sites where solid waste disposal has caused water quality problems are indicated in Figure 1. Rising dust, gases and odors at sites sometimes also cause air quality problems. Therefore, properly managed sanitary landfills are control measures for air and water pollution.

At the same time, other air and water quality control measures create vastly increased quantities of sludge that must be accommodated in landfills or processed for resource recovery. For example, wastewater solids (sewage sludge) quantities will increase two to five-fold when all of the Bay Area's secondary wastewater treatment facilities are in operation. Scrubbers and other devices using water to control air emissions turn air polluting particles into industrial sludges with a potential for impairment of water quality.

It can be seen from these examples that solid waste management planning is needed to help alleviate air and water quality problems.

In the future, air and water quality controls will also be necessary to mitigate the effects of converting solid waste to energy.

2) Public Health and Safety Effects; Aesthetic and Nuisance Effects; Ecological Effects

Inadequate storage and disposal of solid waste may attract flies, rodents, and other vectors of disease. Pathogens and parasites may be transmitted to humans if hospital wastes and sewage sludge are not handled properly.

Injuries may occur as a result of fires and explosions or direct contact with hazardous industrial wastes. Uncovered wastes in evaporation ponds are a danger to migratory birds. Many of these problems have been documented in the past.

Annoyance may be caused by flies, gnats, and other flying pests associated with exposed garbage. Noise, odors, smoke, and unsightliness may accompany handling and disposal of wastes.

Estuaries may be disrupted by filling the shallow reaches, mudflats, and marshes of the Bay. Established biological communities may be disrupted by the filling of canyons.

3) Resource Depleting Effects--of Land, Energy and Reusable Materials in Wastes

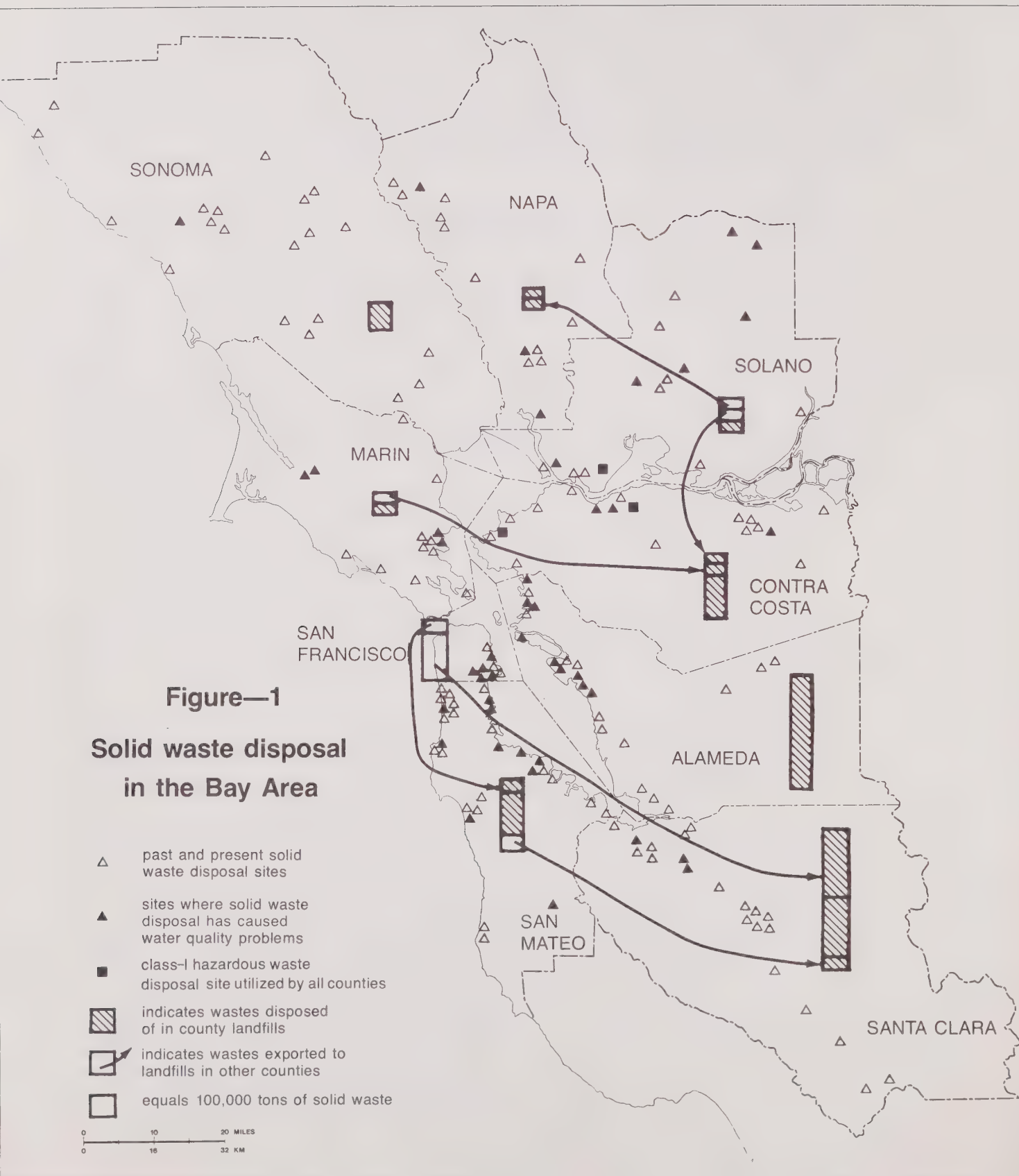
About six million tons of urban refuse and about 0.4 million tons of hazardous industrial wastes are currently being disposed of in landfills with minimal recovery of resources beforehand. Many of the existing landfill

sites will be completely filled in less than 10 years. Removing materials for reuse before landfilling can extend the life of existing landfills, reduce the quantities of wastes that have to be trucked to distant sites, with corresponding reduction in costs, and encourage recycling of reusable materials.

If regionwide programs for separating reusable materials from urban refuse--either by households and commercial establishments or by mechanical separation after collection--had been in operation in 1975, substantial quantities of materials could have been given a second use. For example:

- 200,000 tons of ferrous metal (from tin cans)--equivalent to the steel in 125,000 medium-sized cars.
- 12,000 tons of aluminum (mostly from beverage containers)--equivalent to the aluminum in 100 Boeing 747s.

Considerably more energy is consumed in producing food containers from iron ore, or newsprint from trees, than is required to process cans and newspapers for a second use. Regionwide resource recovery programs for household and commercial wastes would reduce demand on scarce energy resources as well as slow the depletion of virgin resources such as forest and minerals.



Chapter—5

The plan

This draft solid waste management plan describes a physical system for managing the Bay Area solid wastes. It also provides a regional approach to solve the basic problem of landfilling wastes and the related regional problems identified in the previous section. The plan in general calls for:

- Improvement of the existing system of landfilling wastes to ensure public health and safety, to protect environmental quality, and to conserve resources.
- Support of research and demonstration projects to obtain additional information needed for large-scale resource recovery planning.
- Advocacy of Federal and State action to support waste reduction and materials and energy recovery.

In the continuing process, a more comprehensive plan will be developed for regional resource conservation and recovery, and hazardous waste management. The plan will be updated annually as necessary information becomes available. It will guide cities and counties on the location and optimal distribution of large-scale resource recovery facilities as they relate to land use, transportation, and other environmental, social and economic effects.

The draft solid waste management plan recommendations consist of three parts: municipal wastes, hazardous wastes, and wastewater solids. Table 6, in the back of this document, lists all the plan recommendations. It includes policies, actions, the agencies responsible for implementing each action, implementation schedule, legal authority of agency to implement the action, the source of funding, and measures to ensure implementation. In addition, impact assessment for the recommended actions is also summarized.

Narrative Description of the Recommended Plan

1) Municipal Wastes Management

This part of the plan is primarily based upon a composite of the nine county solid waste management plans and implementation programs through 1980. A summary description of the county plans is presented in Table 4. It is recommended that the county plans be carried out as required by SB 5 and as a major component of the regional Solid Waste Management Plan.

Additional recommendations include:

- Updating the county plans and the regional solid waste management plan.
- Review of proposed resource recovery projects.

- Control of land disposal of wastes to protect water quality.
- A coordinated permit approval system for solid waste facilities and disposal sites.
- Action programs to reduce waste.
- Action programs to increase separation and recycling of reusable materials, and
- Federal and State legislative and administrative changes to promote waste reduction and resource recovery.

The following is a brief description of the recommended regional solid waste management system through 1980 based on the county plans. A graphic representation of the regional system is shown in Figure 2.

Storage and Collection. Attempts will be made by the cities and counties to make storage and collection standards more uniform. State standards will be the minimum for any adopted county standards.

The operation of collection services will generally continue according to the existing arrangements with private franchise companies. In some cases, service areas will be more firmly established.

Transfer and Processing Facilities. Because of the location of future disposal sites, about 8 more transfer stations will be needed. Resource recovery operations will be implemented at some of the transfer stations in the short term.

Disposal Sites. By 1980, many of the existing sites will be closed. New sites will be developed but will be farther away from major urban areas.

There is considerable cross-county disposal. In 1975, about 1 million tons of municipal wastes went to landfills outside the county of origin. This trend is likely to continue in the future.

Administration and Operation. Responsibility for administration of solid waste management systems in general will still be shared by cities, counties, and special districts. In some cases, joint exercise of powers agreements have been or will be established among the involved public agencies to guide the implementation of the county solid waste management plans. In other cases, a county department will be designated to administer the county plan and monitor the county franchises; a county solid waste management committee, including all cities and special districts, may be formed to provide guidance for policy making, public information, reviewing and updating the county plan, and setting standards.

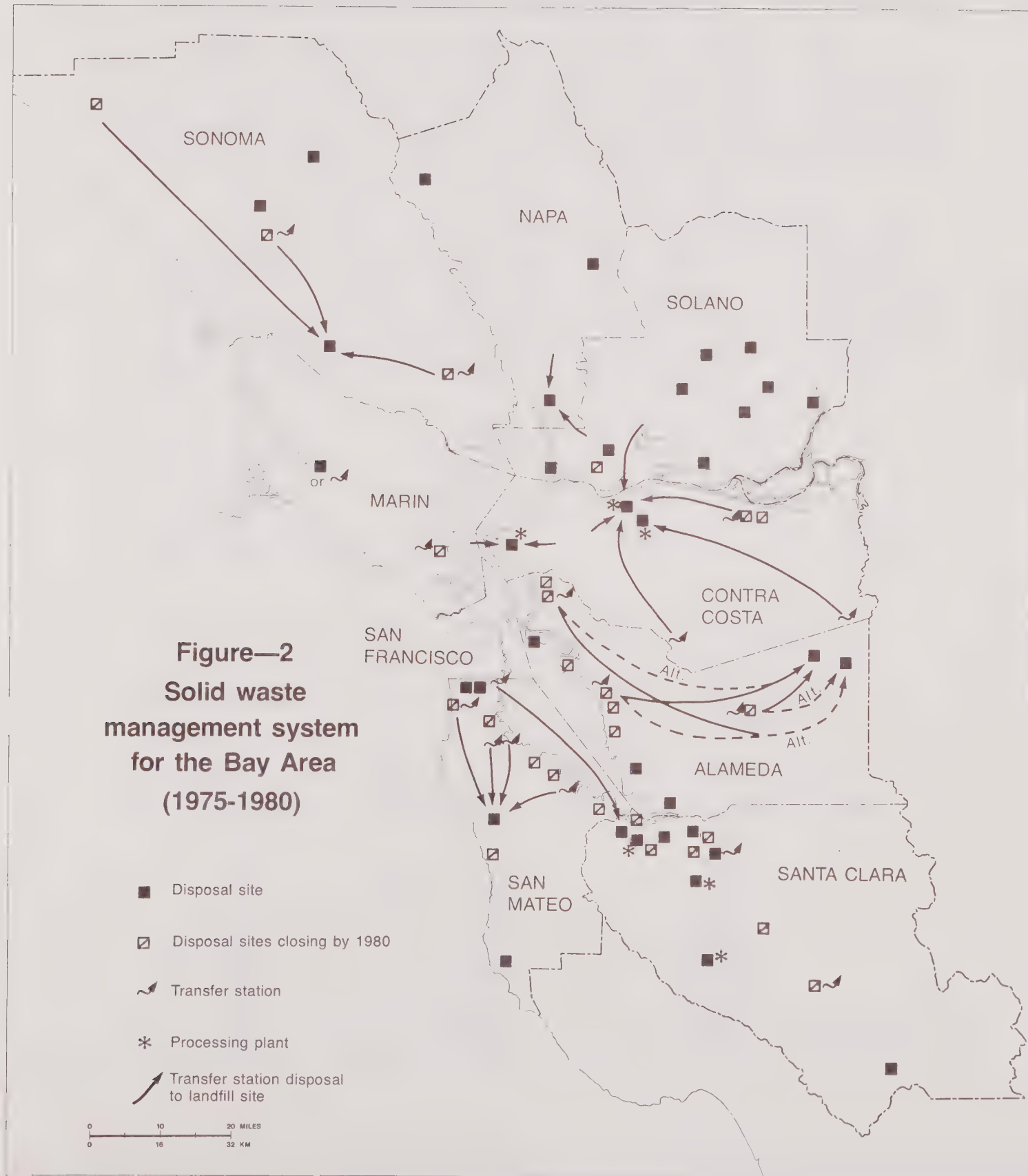
An enforcement agency(s) as required by State law has been or will be designated in each county. It must be an agency other than the agency or county department that implements the county plan. The County Health Department is designated in most cases.

Financing. Capital expenditures for county plan implementation in general include improvements of existing disposal sites, development of future sites, and construction of transfer and processing facilities.

Figure—2
Solid waste
management system
for the Bay Area
(1975-1980)

- Disposal site
- ◻ Disposal sites closing by 1980
- ↪ Transfer station
- * Processing plant
- ↪ Transfer station disposal to landfill site

0 10 20 MILES
 0 16 32 KM



Table—4

Summary description of county plans

COUNTY	PHYSICAL SYSTEMS			ADMINISTRATION	OPERATION	FINANCING
	Storage and Collection	Transfer and Processing Facilities	Disposal Sites			
Alameda	<ul style="list-style-type: none"> Collection system will continue to operate as it currently does with cities and the county contracting to franchisers as necessary. Ordinances specify standards for management of solid waste; many need revision to address specific problems. 	<ul style="list-style-type: none"> Currently, there are no transfer stations, but several will be constructed. No extensive resource recovery operations will be implemented in the short term. Resource recovery operations may be starting in the short term at the Davis St. transfer station. Volunteer recycling efforts will continue. Berkeley has initiated a comprehensive program of source separation and recycling including composting of garden waste. 	<ul style="list-style-type: none"> In the short term as many as 5 of the 11 existing disposal sites will close, leaving six sites. The county plan recognizes the need to establish new sites. 	<ul style="list-style-type: none"> Joint Powers Agency Solid Waste Management Authority (17 members, 13 cities, 3 cities, 3 districts, and the County) will guide the administration of the plan. County Health Department and the City of Berkeley Health Department will enforce laws and ordinances. 	<ul style="list-style-type: none"> Collection is done by Oakland Scavenger Co., two small collectors, and two municipalities operating their own collection services. Ten of the eleven sites were privately operated in 1975. Six of the ten were also privately owned. Most of the Group 2 and 3 wastes are disposed within the county. 	<ul style="list-style-type: none"> The county plan suggests that further study is needed to determine sources of funds for plan implementation. The estimated costs were: Total capital cost \$86,700,000 New capital required \$67,120,000 Average cost per ton \$41.42
Contra Costa	<ul style="list-style-type: none"> Collection system will continue to operate as it currently does with cities and special districts contracting with franchisers. 	<ul style="list-style-type: none"> Currently, all wastes are hauled directly to landfills where limited processing or resource recovery may occur. Two transfer stations and one community drop box are recommended. Two processing facilities are proposed for Acme and West County landfills; an energy recovery facility is proposed for Central Contra Costa Sanitary District facilities. 	<ul style="list-style-type: none"> No new Class II landfill sites are proposed. Two sites are scheduled to close in the short term; two others will probably close by 2000. 	<ul style="list-style-type: none"> The County Board of Supervisors is the official management agency, however, it has established the Solid Waste Management Policy Committee for policy decisions. It is expected that most of the programs in the plan will be carried out by special districts, cities, & the county. The County Health Dept. Environmental Health Division will be the enforcement agency. 	<ul style="list-style-type: none"> Group 2 wastes are collected by 15 franchised waste collectors. Collection of Group 3 wastes is arranged on an ad hoc basis by agreement between the generator and franchise haulers. Currently, all the landfill sites are privately owned and operated. Three of the five sites receive wastes from outside the county. 	<ul style="list-style-type: none"> The county plan did not recommend a particular financing scheme. Several alternatives were recommended for consideration.
Marin	<ul style="list-style-type: none"> Collection services will continue according to existing arrangements with private franchisers. Attempts will be made to make the storage and service standards more uniform. The County, 8 cities and 8 special districts have solid waste ordinances that cover collection, storage, and disposal. All have mandatory collection. 	<ul style="list-style-type: none"> There are currently no transfer stations. The county plan proposed one new transfer station be located in San Rafael. No processing or resource recovery facilities are planned for the short term. 	<ul style="list-style-type: none"> No new sites are anticipated to be needed in the short term. The five sites receiving Marin County wastes will continue to operate in the short term. 	<ul style="list-style-type: none"> A County Solid Waste Manager will be responsible for administering the plan. However funding has not been approved for the position. A Solid Waste Management Committee will be responsible for policy making, public information, reviewing and updating the Plan, and setting standards. Environmental Services Division will be designated as the enforcement agency. 	<ul style="list-style-type: none"> 11 franchise collectors have responsibility for collecting municipal wastes. Ten cities, nine special districts and the county issue franchises. The four sites in Marin county are privately owned. Some Group 2 and 3 wastes from the county are disposed in Contra Costa County. 	<ul style="list-style-type: none"> Capital expenditures occur in the private sector and will be financed through bank loans and leases, and be repaid through user fees and other charges. Administration, policy-making, planning, public information & enforcement must be financed from public funds and franchise fees.
Napa	<ul style="list-style-type: none"> Collection system will continue to operate as it currently does through franchise agreements with private collection companies. The plan recommends adding to ordinances in order to comply with State minimum standards. 	<ul style="list-style-type: none"> Currently, there are no transfer stations. The county plan recommends that the county investigate feasibility of processing facilities. No final recommendations were made on transfer stations. Two general locations for drop box transfer stations were evaluated. 	<ul style="list-style-type: none"> Two of the three landfills have capacity for the long term. One site will be closing in the short term; the operator is investigating possible locations for a new site. 	<ul style="list-style-type: none"> Administration of the county plan will rest with the city councils and the County Board of Supervisors within the unincorporated County. County Division of Environmental Health is the designated enforcement agency. 	<ul style="list-style-type: none"> Group 2 wastes are collected by 4 franchised waste collectors within the 3 franchise zones. Special pickup of wastes can be arranged with the collector. All the landfill sites are privately owned & operated. One landfill site receives wastes from Solano county. 	<ul style="list-style-type: none"> Financing will continue as is with the involved public agencies paying for administration, planning, regulation, and enforcement through public funds and franchise fees.

TABLE 4. SUMMARY DESCRIPTION OF COUNTY PLANS (continued)

COUNTY	PHYSICAL SYSTEMS			ADMINISTRATION	OPERATION	FINANCING
	Storage and Collection	Transfer and Processing Facilities	Disposal Sites			
San Francisco	<ul style="list-style-type: none"> The Building and Health codes will be revised to require incorporation of solid waste storage in new construction. No changes in collection practices are proposed. 	<ul style="list-style-type: none"> A large transfer station is located in the southeast corner of the City. Some processing occurs at the transfer station. No new transfer stations or processing facilities are planned for the short term. The County Plan recommends that the feasibility of a resource recovery system be investigated for implementation in the medium term. 	<ul style="list-style-type: none"> San Francisco does not have its own landfills and will continue to dispose most of its wastes at the Mt. View site. Colma Hillside site will take demolition wastes. 	<ul style="list-style-type: none"> The Department of Public Works has primary responsibility for solid waste management. The Department of Health will be designated as the enforcement agency. 	<ul style="list-style-type: none"> Golden Gate Disposal Company and Sunset Scavenger Company are the two licensed refuse collectors that service San Francisco. There are also 6 debris box operators registered with the Department of Public Works. The existing transfer station is privately owned and operated. 	<ul style="list-style-type: none"> Financing in the short term will continue as is. Collection, transfer, & disposal are financed by private industry through service fees & charges. Administration, operation & enforcement are paid out of City General Fund, Gas Taxes, & service fees from refuse collectors.
San Mateo	<ul style="list-style-type: none"> Collection practices will remain the same. The plan recommends up-dating the county's and cities' garbage regulations and ordinances. 	<ul style="list-style-type: none"> By 1980 two new transfer stations will be added to the present system making a total of four in the county. Recycling operations will include local volunteer projects, activities by private franchisers, and municipally sponsored projects at public rubbish collection points. A front end materials recovery system will be in operation in San Carlos. The feasibility of methane gas recovery will be investigated for Ox Mountain. 	<ul style="list-style-type: none"> By 1980 five disposal sites will have closed. Replacing these will be an expanded system of transfer stations and the Ox Mountain landfill. 	<ul style="list-style-type: none"> The County Public Works Department has primary responsibility for plan administration. The County Board of Supervisors will be the lead agency to coordinate planning, implementation, and management. County Public Health Department has been designated as the enforcement agency. 	<ul style="list-style-type: none"> Six scavenger companies contract with nineteen cities, five sanitary districts, and the county. Most Group 2 and 3 wastes go to county landfills. Some residential wastes go to Santa Clara county sites. A special district, the South County Garbage and Refuse District, operates a landfill facility at Marsh Road. 	<ul style="list-style-type: none"> A combination of public and private financing will be needed for capital investments. Budgeting responsibility for initial capital investments should be with the local government in whose jurisdiction the facility is located. The franchised collection of municipal refuse will continue to be paid through user collection fees or service district charges. Municipal collection will come out of the city general fund.
Santa Clara	<ul style="list-style-type: none"> No changes in collection practices are proposed. The Plan recommends adoption of statewide minimum standards for solid waste handling and disposal. 	<ul style="list-style-type: none"> There are two very small privately owned and operated transfer stations. No new transfer stations are proposed for the short term. Three processing facilities are suggested for the county. The facilities could be in operation by 1980. 	<ul style="list-style-type: none"> No new sites are proposed for the short term. In the short term two of the 15 existing sites will reach capacity. One of these sites is temporarily closed. 	<ul style="list-style-type: none"> The Solid Waste Planning Committee has primary responsibility for county-wide planning and coordination of solid waste management. The County Environmental Health Services and Environmental Management Agency enforce health and non-health related ordinances in unincorporated county. The County Environmental Health Services enforces health related ordinances; in general each city enforces non-health related ordinances. 	<ul style="list-style-type: none"> Eight collection firms operate in unincorporated county. All municipalities contract or franchise with private collection firms. Eleven sites are privately operated; two are operated by cities and one by the Navy. All Group 2 and 3 wastes are disposed within the County. San Mateo transfers some of their wastes to Santa Clara sites. 	<ul style="list-style-type: none"> Financing for planning and coordination will come out of city and county General Funds. New facilities will be either privately or publicly financed as self supporting enterprises. Gate fees will support new processing stations.

TABLE 4. SUMMARY DESCRIPTION OF COUNTY PLANS (continued)

	PHYSICAL SYSTEMS			ADMINISTRATION	OPERATION	FINANCING
	Storage and Collection	Transfer and Processing Facilities	Disposal Sites			
Solano	<ul style="list-style-type: none"> The collection system will continue to operate as it currently does. 	<ul style="list-style-type: none"> There are no existing transfer stations. Limited salvage of metals is practiced at 3 landfills. No new facilities are planned for the short range. 	<ul style="list-style-type: none"> In the short term no new sites are needed; the existing sites will have adequate capacity. Napa County receives Group 2 and 3 wastes from the County. Also Contra Costa receives wastes from Solano. 	<ul style="list-style-type: none"> A program manager will be designated to coordinate enforcement, inspection, planning and administration. The county plan designates the county health department as the enforcement agency. 	<ul style="list-style-type: none"> City of Dixon owns and operates its collection system, the rest of the cities franchise with private companies. There are 7 companies. All of the major sites are privately owned and operated. 3 of the smaller ones are under public ownership. 	<ul style="list-style-type: none"> No capital costs are incurred. Three revenue sources are recommended for administrative costs: direct inspection charges, property taxes, and disposal surcharge on Group I wastes.
Sonoma	<ul style="list-style-type: none"> The plan recommends that solid waste collection services in unincorporated areas be standardized. The plan recommends a change in licensing to an exclusive license format for commercial haulers. 	<ul style="list-style-type: none"> There is one transfer station in operation. Two transfer stations are proposed for the short term. Plan recommends feasibility studies for reuse of agricultural wastes & source separation, and market studies for glass and corrugated paper from wineries. 	<ul style="list-style-type: none"> One of the 5 existing sites will close in the short term. No new sites are proposed. 	<ul style="list-style-type: none"> No recommendations were made for administration. Currently, nine public agencies, eight cities, and the county are involved in solid waste management. The County Department of Public Health is the designated enforcement agency. 	<ul style="list-style-type: none"> There are 11 licensed collectors in the county; 6 serve the cities & 7 of these serve the unincorporated county. All the active disposal sites are owned and operated by the county. No refuse is exported or imported into the county. 	<ul style="list-style-type: none"> Collection services provided by the private sector will continue to be funded by user fees. Funds from the county tax rolls are used when the user fees fall short. Recommends paying for operational costs through fee charges.

Most of the expenditures will occur in the private sector and will be financed through bank loans and leases and repaid through user fees and other charges.

Public financing of some of the large-scale processing facilities is also possible, especially when Federal and State financial assistance is involved.

2) Hazardous Wastes Management

This part of the plan includes recommendations for the improvement of the existing hazardous waste management system. It does not include recommendations for developing a new comprehensive system for the region because of data limitations. Planning for hazardous waste management, including resource recovery and determination of the need for additional landfill capacity, requires accurate data about the quantities and types of wastes being generated. Currently, accurate information is only available for the amounts of wastes being delivered to hazardous waste disposal sites (Class 1 sites). In the Bay Area, only Alameda County--with a grant and technical assistance from the State Department of Health--has conducted an industry-by-industry survey to determine quantities of wastes being produced, reused and disposed of on-site.

It is recommended that:

- Surveys of hazardous industrial wastes and hospital wastes be conducted on a county-by-county basis.
- Need for additional hazardous waste disposal site capacity be determined by the counties.
- Reduction, source separation and resource recovery of hazardous wastes be encouraged.
- Requirements for existing hazardous waste handling practices be enforced.
- Hazardous waste disposal site criteria be established and potential site areas be reserved upon determination of regional need for additional disposal capacity.

3) Wastewater Solids Management

This part of the plan is based on the Wastewater Solids Management Plan being developed in the regional Wastewater Solids Study. This study is being conducted by East Bay Municipal Utility District as the lead agency for a group of wastewater dischargers which includes:

- City and County of San Francisco
- Cities of San Jose/Santa Clara
- Central Contra Costa Sanitary District
- Other dischargers represented by the Subregional Agency Advisory Committee.

Recommended alternatives to be included in the regional Wastewater Solids Management Plan are presented in Table 5.

Table—5

Wastewater solids management alternatives for detailed evaluation

Agency	Sludge End Product		Sludge Process Alternatives	End Product Transport	Disposal/Use Site Location
	Disposal	Use			
EBMUD (Biological Sludge)	Landfill Land Disposal Combustion - Landfill Ash	Agricultural Use Compost/Market	Digestion* Centrifuge Dewater* Compost Combustion	Truck* Barge	Alameda County Contra Costa County* Solano County Treatment Plant Site
San Jose- Santa Clara (Biological Sludge)	Landfill Land Disposal Combustion - Landfill Ash	Agricultural Use Compost/Market	Digestion* Centrifuge Dewater Vacuum Dewater Pressure Dewater Drying Beds Compost Combustion	Truck* Barge	Santa Clara County San Benito County Treatment Plant Site*
San Francisco (Biological) Sludge)	Landfill Land Disposal Combustion - Landfill Ash	Agricultural Use Compost/Market	Digestion* Centrifuge Dewater Vacuum Dewater* Pressure Dewater Compost Combustion	Truck* Barge	San Mateo County Contra Costa County Solano County Santa Clara County*
CCCSD (Lime Sludge)	Landfill Land Disposal Combustion - Landfill Ash	Agricultural Use Industrial Use	Centrifuge Dewater* Pressure Dewater Combustion	Truck* Barge	Contra Costa County* Alameda County
Combinations of Major and Subregional Agencies	Land Disposal Combustion - Landfill Ash	Agricultural Use Compost/Market	Chemical Stabiliza- tion Digestion* Centrifuge Dewater* Vacuum Dewater Pressure Dewater Drying Beds* Compost Combustion	Truck* Barge Rail Pipe	Identified Urban and Rural Sites

*Existing Process

The results to date indicate that there are basically four viable alternatives from which to choose. Two are beneficial use projects--commercial agricultural use and composting/marketing--and two are disposal alternatives--landfill or land disposal and combustion. The combustion alternative includes co-combustion of sewage sludge with municipal solid wastes.

The plan will include regional goals for wastewater solids management and the best apparent alternatives for the four major agencies. Recommendations will also be included for combinations of subregional and local treatment agencies sludge management programs where appropriate.

Facilities plans will be developed for the four major agencies by the Wastewater Solids Study after the completion of the regional wastewater solids plan in December, 1977.

It is recommended that:

- Facilities for wastewater solids management be constructed according to the approved facilities plan.
- Proposed facilities plans for wastewater solids management be reviewed through the A-95 process, and only those proposed facilities that are consistent with the regional solid waste management plan and the 20 year project list for the Environmental Management Plan be approved.
- The regional Wastewater Solids Management Plan be updated as part of the regional solid waste management planning effort.

Benefits and costs of the plan

The assessment of the draft plan recommendations is summarized in Table 6. More detailed assessment information has also been developed in the environmental impact documents for the county solid waste management plans and the Wastewater Solids Management Plan. Major environmental benefits resulting from plan implementation include:

- Protection of air and water quality.
- Reduction of public health and safety hazards, aesthetic, nuisance and ecological effects related to solid wastes.
- Conservation of resources.

These benefits can be realized through:

- Control of dust, odor, as well as leachate and surface runoff at landfill disposal sites.
- Assurance of adequate handling, transportation, and disposal of municipal wastes, hazardous wastes, and wastewater solids.
- Assurance of compliance with health and safety standards for the construction and operation of solid waste management facilities and disposal sites.
- Assurance of appropriate locations for disposal sites.
- Assurance of consistency of large-scale solid waste energy recovery systems with air and water quality goals and standards.
- Assurance of implementation of waste reduction, source separation, and resource recovery programs.

An added benefit of this plan is improved coordination of solid waste management planning among various State and local agencies, and integration of solid waste management and air and water quality planning for the region.

Although the plan will have many benefits for the region in terms of air and water quality and conservation of resources, it is not without costs, both in dollars and in impacts on environmental, institutional and economic factors. The impacts may result directly from the recommended actions such as changes that must be made in allocation of staff time by various agencies or changes in institutional arrangements. However, the recommended actions tend to create indirect impacts for environmental and economic concerns. Indirect impacts are the secondary effects of the actions; they are often more far-reaching and harder to identify and to quantify.

Implementation of many solid waste management recommendations will require a commitment of various agencies to administer, regulate, enforce, plan, or study. These actions imply shifting existing staff or hiring new personnel and could have a significant impact. In some cases impacts

on institutions may be in the form of joint powers agreements or legislative changes that alter existing institutional arrangements or authorities. Some actions may be more difficult to implement due to their controversial or unpopular nature as perceived by special interest groups. Most actions have direct costs associated with them that will be borne by the public or private sectors. (See discussion below.) However, there may also be indirect costs occurring to the private sector and in some cases they could be significant. Constructing landfill sites and transfer stations, and complying with new regulations will require investments by private solid waste management companies. Compliance with new resource recovery programs may involve altering production practices. Costs incurred by private industry will most likely be passed on to the consumer ultimately resulting in increased prices for certain goods and services. For example, residential garbage collection fees or private dumping fees may increase.

The direct impacts on the environment from plan implementation are few. Construction and operation of new solid waste management facilities will create temporary air and noise effects and loss of resource value on or adjacent to the site. Although difficult to determine, the resource recovery actions could have indirect impacts on air and water quality and on energy consumption associated with shifts in industrial production practices and with changes in transportation patterns. There appear to be no significant impacts on social factors.

Table 6 contains estimates for the total public and private costs of implementing the solid waste management plan. Carrying out the recommended actions results in direct costs both to public agencies and the private sector. These costs include three basic strategies: capital costs, operation and maintenance costs, and administrative and regulatory costs.

First, assumptions were made about necessary capital improvements, ongoing operation and maintenance, and staff requirements, including the appropriate time frame up to the year 2000. The costs were then adjusted to 1977 dollars by calculating the present discounted value. The present discounted value is the total amount of money which, if on hand at present, would meet all capital, operation and maintenance, and administrative expenditures through the year 2000 without escalation and assuming that the money could be invested at 6-3/8%. (For comparison purposes, the present discounted value was also calculated on the basis of 10% investment rate.) This calculation yields both a total cost and an annual cost (if the action were paid for in equal payments over the 23 year period).

It should be noted that the plan has two types of recommended actions: 1) those actions that will occur regardless of the outcome of ABAG's plan (such as compliance with a State or Federal regulation); and 2) those actions that will result directly from implementation of the plan. The total cost figure includes costs for both types of recommended actions listed above. The costs directly attributable to the plan are estimated to be \$850,000 annually and would only occur when ABAG's plan is implemented.

Other options not included in the plan

Municipal Wastes Management Options

The first option would involve the re-examination of the nine county solid waste management plans and the development of a truly regional management system through optimization of regional and subregional solid waste processing, transfer, and disposal facilities with or without the constraint of county boundaries. For example, EBMUD could become a subregional (two-county) solid waste management agency.

This option was not considered practicable or publicly desirable. While regional alternatives were in fact, examined in the county plans, the requirements and deadlines of SB5 make concentration on intracounty solid waste management systems in the short term mandatory.

The county plans cover all aspects of solid waste management within the county, including collection. Collection, with very few exceptions, is carried out by private operators under franchises with local governments. While collection is entirely a local responsibility, sometimes it is inseparable from processing and disposal since the franchise agreements, which usually run for several years, may specify the disposition of the collected wastes.

Implementation of both county and regional solid waste plans is largely vested in the county solid waste management authorities. Planning for regional and subregional processing and disposal systems requires the participation of affected local governments and the franchised operators over time in working out the necessary changes in franchise agreements.

The second option would involve the development of the solid waste management plan based upon a composite of the nine county plans and implementation programs through 2000 instead of through 1980.

This option was rejected for several reasons. There are already a number of multi-county disposal arrangements. As nearby sites close there will inevitably be more cross-county transfer and disposal. In addition, the economies of scale that can be realized from resource and energy recovery systems may spur multi-county participation. Further, individual county plans cannot fully address regional air and water quality issues related to solid waste management.

Hazardous Wastes Management Option

One option would be to develop a comprehensive hazardous waste management system for the region instead of accepting the present system and making recommendations to improve the present system.

However, without accurate data about the quantities and types of wastes being generated, it would be very difficult to develop a more comprehensive or long-range management system. Therefore, this option will have to be considered in the continuing planning process.

Wastewater Solids Management Option

Options for wastewater solids management are being considered by the Wastewater Solids Study. Alternatives include commercial agricultural use, composting/marketing, land disposal, and combustion of wastewater solids.

Table—6

Plan recommendations

The recommended policy statements and actions contained in pages have been developed over the past 15 months by ABAG staff and the Solid Waste Management Plan Advisory Committee. At the September 29 meeting the Committee affirmed its general agreement with policies 1 through 21.

The committee made suggestions for changing and improving the actions, the cost estimates, and the impact assessment portions of these tables. Appendix 2 is a summary of the Committee members' comments and the staff responses. For clarification additional cost information has been added to two columns. For policies 11 through 14 the no impacts listed under the Environmental column have been changed, where appropriate, to reflect the indirect impact on air, water and energy resulting from implementation of resource recovery programs. Further work is needed on the assessment tables to assure that impact information is correct and as complete as possible.

Abbreviations used in the solid waste management plan recommendations

BAAPCD	- Bay Area Air Pollution Control District
BASWMP	- Bay Area Solid Waste Management Project
CPCFA	- California Pollution Control Financing Authority
EPA	- Environmental Protection Agency
FWPCA	- Federal Water Pollution Control Act
HUD	- Housing and Urban Development
JPA	- Joint Powers Agreement
OMB	- Office of Management and Budget
RWQCB	- Regional Water Quality Control Board
SSWMB	- State Solid Waste Management Board
SWRCB	- State Water Resources Control Board
AB 2439	- Z'berg - Kapiloff Solid Waste Control Act of 1976
RCRA	- Resource Conservation and Recovery Act of 1976 (see page).
SB 5	- Nejedly - Z'berg - Dills Solid Waste Management and Resource Recovery Act of 1972 (see page).
SB 424	- An act to require ABAG to prepare and update a regional solid waste management plan for the Bay Area (see page).

Solid waste management plan recommendations

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Policy 1 THE REGIONAL SOLID WASTE MANAGEMENT PLAN SHOULD PRIMARILY BE BASED ON THE COUNTY SOLID WASTE MANAGEMENT PLANS: PRIMARY RESPONSIBILITY FOR ADEQUATE SOLID WASTE MANAGEMENT SHALL REST WITH LOCAL GOVERNMENTS.								
Action 1.1 Carry out county plans as part of the regional solid waste management plan.	Carry out county solid waste management plans as part of the regional solid waste management plan.	Counties, with participation from cities and other local jurisdictions.	Ongoing	State Senate Bill 5 (SB 5)	\$ 450,000 ^a (\$5,250,000 ^a 1978-2000) \$215,000,000 ^b (\$570,000,000 ^b 1978-1980)	0	State and local funds.	State Solid Waste Management Board (SSWMB) may take legal action if plans are not implemented, or shall not approve any request for State or Federal financial assistance for any solid waste management project not in conformance with the approved county plans.
Action 1.2 Update county plans.	Update the county solid waste management plans in compliance with SB-5 and to be consistent with the updated regional solid waste management plan.	Counties.	Ongoing	SB 5	\$ 225,000 ^a (\$2,620,000 ^a 1978-2000)	0	Local general funds.	Existing SSWMB requirements will ensure plan update.
^a Public cost. ^b Private cost. ^c Public and private costs. Note: Figures in parenthesis are total costs expressed as present discounted value for recommended action throughout the period of implementation.								

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
<u>Air Quality</u> o Indirect impact; county plans require landfills to meet standards for dust and odor control. o Direct impact as a result of increased emission from long-haul trucks to distant landfills recommended in some county plans. <u>Water Quality</u> o Direct impact; county plans require landfills to meet standards for protection of ground and surface waters. <u>Physical Resources</u> o Direct benefits in most aspects of waste management. o Direct benefits in resource recovery by increasing commitment of local agencies. <u>Energy</u> o Direct benefits in energy production since some county plans recommended energy recovery from solid waste as an alternative in the future. <u>Amenities</u> o Noise associated with solid waste facilities construction and operation. *Note: For more information on impacts of individual County Plans, see EIRs done for each one.	<u>Financial</u> o Direct Cost-Public: (Administrative and regulatory costs-funds committed) Counties (9) 1978-2000 \$450,000/year (For region) o Fiscal Effects on Local Government -Minor impacts on the property tax rate. -Franchise tax revenues may be increased. -New facilities may result in additional fees and other user charges. -Financing of energy recovery facilities may depend on Federal and State grants. <u>Institutional</u> o Location of certain facilities may not be accepted by the public. o Implementation of county plan may require JPA among the county and cities within the county and also agreements among private and public agencies. o County staff time will be required to carry out the plans.	<u>Production of Goods and Services</u> o Scavenger companies may have to improve services to meet standards or may have to expand service area. o Employment - Temporary and permanent increase in employment due to facilities construction, expanded collection service, compliance with State standards, and operation of new facilities. <u>Income and Investments</u> o Private and public investment will be needed for new facilities associated with resource recovery, transfer stations, and landfills. o Possible temporary decrease in profits of scavenger companies due to capital investments. <u>Consumer Expenditures</u> o Costs for implementing county plans will be passed on to the public that receives garbage collection service or that dumps at landfills.	<u>Housing Supply</u> o No Impact. <u>Physical Mobility</u> o No Impact. <u>Health and Safety</u> o Compliance with standards will reduce health and safety hazards associated with solid waste. <u>Sense of Community</u> o No Impact. <u>Equity</u> o No Impact. <u>Urban Patterns</u> o No Impact.
<u>Physical Resources</u> o Direct benefits in solid waste management. o Potentially direct significant benefits in resource recovery since the updated plans may include more aggressive programs for source separation of waste. <u>Energy</u> o Potentially direct significant benefit in energy production since the updated plans may include site specific energy recovery programs. All other environmental impacts same as above.	<u>Financial</u> o Direct Cost-Public: (Administrative and regulatory costs-funds committed) Counties - 1978-2000 \$225,000/year (For Region) <u>Institutional</u> See Action 1.1	Same as Action 1.1	Same as Action 1.1

SOLID WASTE MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Policy 2								
REGIONAL SOLID WASTE MANAGEMENT PLANNING SHOULD BE COORDINATED WITH LOCAL PLANNING AND BE AN INTEGRAL PART OF AREA-WIDE ENVIRONMENTAL MANAGEMENT PLANNING.								
Action 2.1								
Update the regional plan.	Update the regional solid waste management plan, incorporating results of ongoing planning activities of other state, regional, and local agencies, and including more detailed planning for regional issues.	ABAG	1979; annually after 1979.	1972 Federal Water Pollution Control Act (FWPCA) Amendments Sec. 208; SB 424.	\$ 28,000 ^a (\$320,000 ^a 1979-2000)	\$28,000 ^a (\$320,000 ^a 1979-2000)	ABAG dues; Federal and State funds.	Existing EPA and State SWMB requirements will ensure plan update.
Policy 3								
REGIONAL OR SUBREGIONAL RESOURCE RECOVERY PROJECTS SHOULD BE CONSISTENT WITH THE REGIONAL SOLID WASTE MANAGEMENT PLAN AND THE ENVIRONMENTAL MANAGEMENT PLAN.								
Action 3.1								
Review proposed resource recovery projects.	Review proposed resource recovery projects including large-scale waste combustion projects to ensure consistency with regional solid waste management and other environmental goals and standards.	EPA, SSWMB, ABAG, State Clearing-house.	Ongoing	FWPCA Section 208, Office of Management and Budget-Circular A-95.	\$ 6,000 ^a (\$65,000 ^a 1978-2000)	0	Federal and State funds; ABAG dues.	Agencies will carry out existing review authorities.

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
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Air Quality

- o Indirect Impact since the updated regional plan will consider air quality impact of large-scale energy recovery systems.

Water Quality

- o Direct Impact since the updated plan will include control measures for landfills to protect ground and surface water quality.

Physical Resources

- o Direct benefits in solid waste management.
- o Direct benefits in resource conservation since the updated plan will include action programs for waste reduction, source separation, and resource recovery.

Energy

- o Indirect benefits due to resource conservation and reduction of energy demand.

Amenities

- o Indirect impact due to noise associated with solid waste facilities construction and operation recommended in the plan.

Financial

- o Direct Cost-Public:
ABAG - \$30,000/year
(Administrative costs-funds committed)
- o Fiscal Effects on Local Government
-New facilities may result in additional fees and other user charges.
-Financing of recommended programs and facilities may depend on Federal and State grants.

Institutional

- o Location of certain recommended facilities may not be accepted by the public.
- o Implementation of regional plan may require JPA among cities and counties and agreements among private and public agencies.

Production of Goods and Services

- o Employment - Temporary and permanent increase in employment due to recommended programs and facilities construction.

Income and Investment

- o Same as Action 1.1

Consumer Expenditures

- o Costs for implementing the plan will be passed on to the public that receives garbage collection service or that dumps at landfills.

Housing Supply

- o No Impact.

Physical Mobility

- o No Impact.

Health and Safety

- o Compliance will reduce health and safety hazards associated with solid waste.

Sense of Community

- o No Impact.

Equity

- o No Impact.

Urban Patterns

- o No Impact.

Air Quality

- o Indirect benefits since the review will ensure consistency of proposed projects with air quality goals and standards.

Water Quality

- o Indirect benefits since the review will ensure consistency of proposed projects with water quality goals and standards.

Physical Resources

- o Direct Impact on solid waste management.

Energy

- o Indirect benefits since the proposed projects will recover energy from solid waste.

Amenities

- o Direct benefits since the review will ensure mitigation measures for impacts related to amenities.

Financial

- o Direct Cost-Public:
(Administrative costs-funds committed)
ABAG - \$650/year
1978-2000 (For Region)
- Other Reviewing Agencies (7)-
1978-2000 \$5,000/year
(For Region)

Institutional

- o No Impact.

Production of Goods and Services

- o No Impact.

Income and Investments

- o No Impact.

Consumer Expenditures

- o No Impact.

Housing Supply

- o No Impact.

Physical Mobility

- o No Impact.

Health and Safety

- o Indirect benefits since the review will ensure compliance of proposed projects with health and safety standards.

Sense of Community

- o No Impact.

Equity

- o No Impact.

Urban Patterns

- o No Impact.

SOLID WASTE MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Policy 4								
ALL SOLID WASTE DISPOSAL SITES MUST BE SITUATED, DESIGNED AND OPERATED TO PROVIDE PROTECTION TO THE SURFACE AND GROUND WATER QUALITY AS WELL AS PROTECTION OF PUBLIC HEALTH AND SAFETY.								
Action 4.1								
Accelerate the adoption and updating of the Waste Discharge Requirements.	Accelerate the adoption and updating of the Waste Discharge Requirements for <u>all</u> landfill sites.	California Regional Water Quality Control Boards (RWQCB).	June 1979	California Water Code Sections 13300 6 14040; California Administrative Code, Title 23, Chapter 3, Subchapter 15.	\$ 184,000 ^C (\$2,150,000 ^C 1978-2000)	0	State general funds.	As a part of an agreement to be negotiated between ABAG and RWQCBs.
Action 4.2								
Issue and enforce permits for solid waste facilities and disposal sites.	Issue and enforce permits for the operation of solid waste facilities and disposal sites that are consistent with county and regional solid waste management planning.	California Solid Waste Management Board, City and County enforcement agencies.	August 1977 Ongoing	AB 2439	\$ 2,100,000 ^C (\$15,630,000 ^C 1978-2000)	0	State and local general funds.	State SWMB has the legal mandate to issue permits and may take legal action to ensure enforcement.

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
<u>Air Quality</u> o Indirect impacts since compliance with the requirements may result in reduction of dust and odor at landfills. <u>Water Quality</u> o Direct benefits since compliance with requirements will result in protection of surface and ground water quality. <u>Physical Resources</u> o Indirect benefits for surrounding ecosystems, agricultural lands due to increased protection of surface and ground water quality. o Indirect impacts on landfill management practices due to compliance with requirements. o Indirect temporary impacts on landfill site operations resulting from on-site construction to meet requirements. <u>Energy</u> o Indirect impacts on energy demands due to energy required for construction. <u>Amenities</u> o Indirect benefits since compliance with the requirements may result in reduction of litter at or near the landfills.	<u>Financial</u> o Direct Cost-Public: (Administrative and regulatory costs-funds committed) RWQCB - 1978-2000 \$15,000 (Adopt requirements) 1979-2000 \$15,000/year (Update requirements) <u>Institutional</u> o Direct impact on RWQCB because it may have to speed up the adoption of requirements.	<u>Direct Cost-Private</u> o Indirect impact on landfill site operators related to meeting requirements: 1978-1979 \$1,300,000 (total cost to meet new and revised requirements for 2 years) 1980-2000 \$80,000/year (meeting requirements) <u>Production of Goods and Services</u> o Indirect impact resulting from interruption of landfill operations; extent will depend on site. <u>Income and Investment</u> o Direct impact on landfill site owners and operators due to required improvements to sites. <u>Consumer Expenditures</u> o Indirect impact on landfill site users due to increase in gate fees.	<u>Housing Supply</u> o No impact. <u>Physical Mobility</u> o No impact. <u>Health and Safety</u> o Indirect impacts on public health by elimination of hazards from sub-standard landfills. <u>Sense of Community</u> o No impact. <u>Equity</u> o No impact. <u>Urban patterns</u> o No impact.
<u>Physical Resources</u> o Direct impacts on landfill management practices due to compliance with State standards. <u>Energy</u> o No impact. All other environmental impacts same as Action 4.1.	<u>Financial</u> o Direct Cost - Public: (All costs administrative and regulatory-funds committed) SSWMB - 1978 \$48,000 (issue permits) 1978-2000 \$80,000/year (enforce permits) <u>Counties and Cities -</u> 1978 \$40,000 (issue permits) 1978-2000 \$450,000/year (enforce permits) o Fiscal Effects on Local Governments - Cities and counties may impose permit fees. <u>Institutional</u> o SSWMB may delegate the authority of permit issuance to local enforcement agencies. o Permit requirements may be viewed negatively by some landfill site operators. o Permit requirements may be viewed positively by groups concerned with effects of solid waste management practices on environment.	<u>Direct Cost-Private</u> o Impact on all operators of private landfill sites in Region: 1978 \$40,000 (obtain permits) 1978-1979 \$450,000/year (make necessary improvements) <u>Production of Goods and Services</u> o Employment - permanent increase in employment due to issuance and enforcement of permits. <u>Income and Investment</u> o Private investment may be needed to meet permit requirements. o May temporarily decrease profits of site operators due to capital investments. <u>Consumer Expenditures</u> o Costs for compliance with permit requirements may be passed on to consumers.	<u>Health and Safety</u> o Compliance with permit requirements will reduce health and safety hazards associated with solid waste. All other social impacts same as Action 4.1.

SOLID WASTE MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Policy 5 PROVIDE A CONVENIENT SOURCE OF INFORMATION ON REQUIRED PERMITS FOR A PROPOSED SOLID WASTE MANAGEMENT FACILITY.								
Action 5.1 Compile, update, and make available a permit register.	A master file would be available at county offices with descriptions of permits required for the proposed type of facility and with information on agency contacts and permit procedures. o Compile information on each regulatory and commenting agency and distribute to the County Solid Waste Management Agencies.	ABAG	Ongoing	Joint Powers Agreement (JPA) of ABAG.	\$ 800 ^a (\$9,200 ^a 1978-2000)	\$ 800 ^a (\$9,200 ^a 1978-2000)	ABAG dues.	One general agreement to cover all aspects of the approved permit coordination system (Policies 5-10) will be signed by participating agencies. It will specify implementation and enforcement mechanisms where appropriate. ABAG advocacy through EMTF and Executive Board.
Action 5.2 Assign a staff member knowledgeable in solid waste management to assist applicants.	A knowledgeable staff member would be available at each County to assist an applicant in identifying the permit requirements.	County Solid Waste Management Agencies.	1/78 Ongoing	JPA for each County Solid Waste Management Agency.	\$ 600 ^a (\$7,600 ^a 1978-2000)	\$ 600 ^a (\$7,600 ^a 1978-2000)	County general funds, fees and surcharges.	

ENVIRONMENTAL IMPACT	INSTITUTIONAL/FINANCIAL IMPACT	ECONOMIC IMPACT	SOCIAL IMPACT
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Air Quality
o No Impact.

Water Quality
o No Impact.

Physical Resources
o Direct impacts on solid waste management associated with greater efficiency and less time involved in developing new and expanded facilities.

Energy
o No impact.

Amenities
o No Impact.

Financial
o Direct Cost-Public:
(Administrative and regulatory costs)

ABAG -	Total
1978-2000	\$ 8713
r= 6-3/8%	
r= 10%	\$ 6849

Participating Regulatory Agencies -

1978	Total for Region
r= 6-3/8%	\$ 428
r= 10%	\$ 414

Counties -

1978	Total
r= 6-3/8%	\$ 102
r= 10%	\$ 99

Institutional

- o Indirect impacts on solid waste management companies that will apply for permits-high acceptability.
- o Direct impact on permit procedures of county due to limited alterations.
- o Direct impacts due to allocation of county staff for assisting applicants in permit process.

Direct Cost-Private

- o Probable cost savings to private developer of solid waste facilities due to more efficient processing of permits.

Production of Goods and Services
o No Impact.

Income and Investment
o Indirect impact on companies that must make capital investments for solid waste facilities due to increased efficiency of permit process and less time required.

Consumer expenditures
o No impact.

Housing Supply
o No Impact.

Physical Mobility
o No Impact.

Health and Safety
o No Impact.

Sense of Community
o No Impact.

Equity
o No Impact.

Urban Patterns
o No Impact.

Same as Action 5.1.

Financial
o Direct Cost-Public:
(Administrative and regulatory costs)
County solid waste management agencies-

1978-2000	Total For Region
r= 6-3/8%	\$7625
r= 10%	\$5737

(approx. \$650/year)

Same as Action 5.1.

Same as Action 5.1.

SOLID WASTE MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Policy 6								
STANDARDIZE INFORMATION IN THE PERMIT PROCESS WHEREVER POSSIBLE TO AVOID DUPLICATION OF PAPERWORK AND TO INCREASE EFFICIENCY.								
Action 6.1 Make available an application packet.	<p>ABAG will make available to the the Counties a packet that includes permit application forms from all necessary regulatory agencies. Could be tailored for an applicant to include the appropriate application forms.</p> <ul style="list-style-type: none"> ABAG will collect permit application forms from all regulatory agencies; develop a general cover sheet; distribute packets to County Solid Waste Management Agencies. County Solid Waste Management Agencies will design an application packet for an applicant to include all required permit forms. ABAG will monitor changes and advise management agencies. 	ABAG; County Solid Waste Management Agencies.	Oct. 1977 Ongoing.	JPA of ABAG.	\$ 300 ^a (\$3,900 ^a 1978-2000)	\$ 300 ^a (\$3,900 ^a 1978-2000)	ABAG dues; County general funds, fees and surcharges.	Same as Action 5.1.
Policy 7								
ALL ISSUES RELATED TO THE PROPOSED PROJECT SHOULD BE IDENTIFIED AND EXAMINED EARLY IN THE PERMIT PROCESS IN ORDER BOTH TO HELP APPLICANTS UNDERSTAND PROBLEMS AND TO ASSIST AGENCIES IN THEIR REVIEW AND DECISION-MAKING.								
Action 7.1 Hold meetings prior to the public hearings.	<p>Meet with the regulatory agency staffs and other participants as appropriate for discussion of project-related problems and for exchange of information. Initiated by coordination agency, responsible agencies or by applicant. Depending on the project, one of the following may be appropriate.</p> <ol style="list-style-type: none"> Discussion among staff only Same, except applicant included. Meeting could include staff, applicant, public and decision-makers. 	County Solid Waste Management, ABAG, or other agencies, as appropriate.	Jan. 78; Continuous after Jan. 78.	JPA of ABAG.	\$ 3,400 ^a (\$40,000 ^a 1978-2000)	\$ 3,400 ^a (\$40,000 ^a 1978-2000)	ABAG dues; County general funds, fees and surcharges. Regulatory agencies operating funds.	Same as Action 5.1.
Policy 8								
AGENCIES' EXISTING REGULATIONS SHOULD BE CLARIFIED AND ADDITIONAL ONES SHOULD BE ADOPTED WHERE NECESSARY TO FORMALIZE PROCEDURES USED IN PROCESSING OF OR COMMENTING ON APPLICATIONS.								
Action 8.1 Clarify existing agency regulations that establish procedures for processing permit applications and adopt additional regulations, where necessary.	Existing procedures should be made understandable to other agencies and to applicants for permits. Where needed, formalize procedures including criteria for administrative vs. regular matters, application procedures, comments, hearings and appeal.	All agencies.	Oct.-June 1978.	Enabling legislation of agencies.	\$ 1,500 ^a (\$18,200 ^a 1978)	\$ 1,500 ^a (\$18,200 ^a 1978)	County general funds, fees and surcharges; regulatory agencies operational funds.	Same as Action 5.1.

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
Same as Action 5.1.	<div>Financial</div> <div>o Direct Cost-Public:</div> <div>ABAG-</div> <div><div>1978-2000</div><div>r= 6-3/8%</div><div>r= 10%</div><div>Total</div><div>\$3874</div><div>\$2995</div></div> <div>Institutional</div> <div>o Direct impact on county staff due to additional time involved in assisting applicant.</div> <div>o Highly acceptable to developers of solid waste facilities.</div>	Same as Action 5.1.	Same as Action 5.1.
Same as Action 5.1.	<div>Financial</div> <div>o Direct Cost-Public:</div> <div>(Administrative costs-holding meetings)</div> <div>All Agencies (8) -</div> <div><div>1978-2000</div><div>r= 6-3/8%</div><div>r= 10%</div><div>Total For Region</div><div>\$ 39,639</div><div>\$ 29,823</div></div> <div>Institutional</div> <div>o Acceptable to private developers of new or expanded solid waste facilities and to involved public agencies.</div> <div>o Requires moderate cooperation among regulatory agencies and possible alteration of internal permit procedures.</div>	Same as Action 5.1.	<div>Housing Supply</div> <div>o No Impact.</div> <div>Physical Mobility</div> <div>o No Impacts.</div> <div>Health and Safety</div> <div>o No Impact.</div> <div>Sense of Community</div> <div>o Benefit to extent that meeting allows early public input and allows community issues to surface.</div> <div>Equity</div> <div>o No Impact.</div> <div>Urban Patterns</div> <div>o No Impacts.</div>
Same as Action 5.1.	<div>Financial</div> <div>o Direct Cost-Public:</div> <div>(Administrative and regulatory costs)</div> <div>Regional, State, Federal Agencies (7)</div> <div><div>1978</div><div>r= 6-3/8%</div><div>r= 10%</div><div>Total For Region</div><div>\$ 4324</div><div>\$ 4182</div></div> <div>Counties (9)</div> <div><div>1978</div><div>r= 6-3/8%</div><div>r= 10%</div><div>Total For Region</div><div>\$ 13,912</div><div>\$ 13,454</div></div> <div>Institutional</div> <div>o Very acceptable to private developers of new or expanded solid waste facilities and to involved public agencies.</div>	<div>Direct Costs-Private</div> <div>o Probable cost savings to private developers of solid waste facilities due to decreased processing time and more certainty in overall process.</div> <div>Production of Goods and Services</div> <div>o No Impact.</div> <div>Income and Investments</div> <div>o No Impact.</div> <div>Consumer Expenditures</div> <div>o No Impact.</div>	Same as Action 5.1.

SOLID WASTE MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Policy 9								
WHILE THERE IS A NEED FOR THOROUGH AND CAREFUL PERMIT REVIEW, UNREASONABLE DELAY SHOULD BE AVOIDED IN THE PERMIT APPROVAL PROCESS.								
Action 9.1 responsible agencies set and adhere to time limits, and commenting agencies adhere to time limits set by regulatory agencies.	All regulatory agencies should set definite time limits for permit processing; internal procedures should be geared to meet these deadlines. Comments on projects should be sent to responsible agencies within time limits.	All agencies.	Oct. 1977	Same as Action 8.1.	0	0	County general funds, fees and surcharges; regulatory agencies operational funds.	Same as Action 5.1.
Policy 10								
PERMIT COORDINATION PROCEDURES FOR SOLID WASTE MANAGEMENT ACTIVITIES SHOULD BE INTEGRATED WITH OTHER COORDINATION PROJECTS IN THE FUTURE, AS APPROPRIATE.								
Action 10.1 Monitor other permit coordination proposals to ensure that "over-coordination" or "dis-jointed coordination" does not occur.	Maintain contact with other agencies working on permit streamlining and inform them of experience gained in implementation of this process; such as: 1. OPR permit handbook 2. Resources Agency proposal 3. ABAG-OPR Industrial Siting 4. AB-884 5. Local governments.	ABAG	Oct. 1977	JPA of ABAG.	\$ 500 ^a (\$6,300 ^a 1978-1982)	\$ 500 ^a (\$6,300 ^a 1978-1982)	ABAG dues.	ABAG and local government advocacy.
Action 10.2 Work with other agencies to explore the possibility of legislative changes that would further streamline the permit approval process, if appropriate.	Legislative changes might affect the scope and extent of agencies' regulatory authority. They could occur in the context of the overall permit approval system.	ABAG	Oct. 1977	JPA of ABAG.	\$ 1,900 ^a (\$22,500 ^a 1978-1982)	\$ 1,900 ^a (\$22,500 ^a 1978-1982)	ABAG dues.	ABAG advocacy.

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
Same as Action 5.1.	<u>Financial</u> o Direct Cost-Public: ABAG- 1978-2000 <u>Total</u> r= 6-3/8% \$3874 r= 10% \$2995 <u>Institutional</u> o Direct Impact on county staff due to additional time involved in assisting applicant. o Highly acceptable to developers of solid waste facilities.	Same as Action 5.1.	Same as Action 5.1.
Same as Action 5.1.	<u>Financial</u> o Direct Cost-Public: (Administrative costs-holding meetings) <u>All Agencies (8) -</u> 1978-2000 <u>Total For Region</u> r= 6-3/8% \$ 39,639 r= 10% \$ 29,823 <u>Institutional</u> o Acceptable to private developers of new or expanded solid waste facilities and to involved public agencies. o Requires moderate cooperation among regulatory agencies and possible alteration of internal permit procedures.	Same as Action 5.1.	<u>Housing Supply</u> o No Impact. <u>Physical Mobility</u> o No Impacts. <u>Health and Safety</u> o No Impact. <u>Sense of Community</u> o Benefit to extent that meeting allows early public input and allows community issues to surface. <u>Equity</u> o No Impact. <u>Urban Patterns</u> o No Impacts.
Same as Action 5.1.	<u>Financial</u> o Direct Cost-Public: (Administrative and regulatory costs) <u>Regional, State, Federal Agencies (7)</u> 1978 <u>Total For Region</u> r= 6-3/8% \$ 4324 r= 10% \$ 4182 <u>Counties (9)</u> 1978 <u>Total For Region</u> r= 6-3/8% \$ 13,912 r= 10% \$ 13,454 <u>Institutional</u> o Very acceptable to private developers of new or expanded solid waste facilities and to involved public agencies.	<u>Direct Costs-Private</u> o Probable cost savings to private developers of solid waste facilities due to decreased processing time and more certainty in overall process. <u>Production of Goods and Services</u> o No Impact. <u>Income and Investments</u> o No Impact. <u>Consumer Expenditures</u> o No Impact.	Same as Action 5.1.

SOLID WASTE MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Policy 9								
WHILE THERE IS A NEED FOR THOROUGH AND CAREFUL PERMIT REVIEW, UNREASONABLE DELAY SHOULD BE AVOIDED IN THE PERMIT APPROVAL PROCESS.								
Action 9.1 responsible agencies set and adhere to time limits, and commenting agencies adhere to time limits set by regulatory agencies.	All regulatory agencies should set definite time limits for permit processing; internal procedures should be geared to meet these deadlines. Comments on projects should be sent to responsible agencies within time limits.	All agencies.	Oct. 1977	Same as Action 8.1.	0	0	County general funds, fees and surcharges; regulatory agencies operational funds.	Same as Action 5.1.
Policy 10								
PERMIT COORDINATION PROCEDURES FOR SOLID WASTE MANAGEMENT ACTIVITIES SHOULD BE INTEGRATED WITH OTHER COORDINATION PROJECTS IN THE FUTURE, AS APPROPRIATE.								
Action 10.1 Monitor other permit coordination proposals to ensure that "over-coordination" or "dis-jointed coordination" does not occur.	Maintain contact with other agencies working on permit streamlining and inform them of experience gained in implementation of this process; such as: 1. OPR permit handbook 2. Resources Agency proposal 3. ABAG-OPR Industrial Siting 4. AB-884 5. Local governments.	ABAG	Oct. 1977	JPA of ABAG.	\$ 500 ^a (\$6,300 ^a 1978-1982)	\$ 500 ^a (\$6,300 ^a 1978-1982)	ABAG dues.	ABAG and local government advocacy.
Action 10.2 Work with other agencies to explore the possibility of legislative changes that would further streamline the permit approval process, if appropriate.	Legislative changes might affect the scope and extent of agencies' regulatory authority. They could occur in the context of the overall permit approval system.	ABAG	Oct. 1977	JPA of ABAG.	\$ 1,900 ^a (\$22,500 ^a 1978-1982)	\$ 1,900 ^a (\$22,500 ^a 1978-1982)	ABAG dues.	ABAG advocacy.

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS												
Same as Action 5.1.	<u>Financial</u> <ul style="list-style-type: none">o Direct Cost-Public (Administrative and regulatory costs Included In Action 8.1) <u>Institutional</u> <ul style="list-style-type: none">o Indirect benefits to developers of solid waste facilities - high level of acceptability.o Possible impact on staffs of agencies associated with time necessary to develop time limits.o Impact on Internal permit procedures due to stricter adherence to definite time limits.	Same as Action 8.1.	Same as Action 5.1.												
<u>Air Quality</u> <ul style="list-style-type: none">o No impact. <u>Water Quality</u> <ul style="list-style-type: none">o No impact. <u>Physical Resources</u> <ul style="list-style-type: none">o No impact. <u>Energy</u> <ul style="list-style-type: none">o No impact. <u>Amenities</u> <ul style="list-style-type: none">o No impact.	<u>Financial</u> <ul style="list-style-type: none">o Direct Cost-Public: (Administrative costs-staff time to monitor) <u>ABAG -</u> <table><tr><td>1978-1982</td><td>Total</td></tr><tr><td>r= 6-3/8%</td><td>\$6,255</td></tr><tr><td>r= 10%</td><td>\$5,686</td></tr></table> <u>Institutional</u> <ul style="list-style-type: none">o Possible impact on overall permit procedure if integration of solid waste coordination and systems for other development activities occurs.	1978-1982	Total	r= 6-3/8%	\$6,255	r= 10%	\$5,686	<u>Direct Cost-Private</u> <ul style="list-style-type: none">o No impact. <u>Production of Goods and Services</u> <ul style="list-style-type: none">o No impact. <u>Income and Investment</u> <ul style="list-style-type: none">o No impact <u>Consumer Expenditures</u> <ul style="list-style-type: none">o No impact.	Same as Action 5.1.						
1978-1982	Total														
r= 6-3/8%	\$6,255														
r= 10%	\$5,686														
Same as Action 10.1.	<u>Financial</u> <ul style="list-style-type: none">o Direct Cost-Public: (Administrative costs) <u>ABAG -</u> <table><tr><td>1978-1982</td><td>Total</td></tr><tr><td>r= 6-3/8%</td><td>\$ 6,255</td></tr><tr><td>r= 10%</td><td>\$ 5,686</td></tr></table> <u>Other Regional and State Agencies-</u> <table><tr><td>1978-1982</td><td>Total</td></tr><tr><td>r= 6-3/8%</td><td>\$ 16,262</td></tr><tr><td>r= 10%</td><td>\$ 14,784</td></tr></table> <u>Institutional</u> <ul style="list-style-type: none">o Possible significant beneficial impact on permit approval process. May result in significant institutional changes.	1978-1982	Total	r= 6-3/8%	\$ 6,255	r= 10%	\$ 5,686	1978-1982	Total	r= 6-3/8%	\$ 16,262	r= 10%	\$ 14,784	Same as Action 10.1.	Same as Action 5.1.
1978-1982	Total														
r= 6-3/8%	\$ 6,255														
r= 10%	\$ 5,686														
1978-1982	Total														
r= 6-3/8%	\$ 16,262														
r= 10%	\$ 14,784														

SOLID WASTE MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Policy 11								
PUBLIC EDUCATION PROGRAMS ARE ESSENTIAL TO PROMOTE AWARENESS OF NEED FOR WASTE REDUCTION.								
Action 11.1 Federal and State governments should make funds available to support education program for promoting waste reduction.	Federal and State governments should fund education programs aimed at: <ul style="list-style-type: none"> o primary and secondary schools, o households, o stores and offices, and o manufacturing plants. 	State and Federal governments.	Continuing	Federal and State Constitutions.	\$ 2,500 ^a (\$29,000 ^a 1978-2000)	\$ 2,500 ^a (\$29,000 ^a 1978-2000)	State and Federal funds.	After plan approval, EPA, SSWMB, Cities and Counties will adopt recommendations and will advocate State and Federal funding of education programs.
Action 11.2 Provide public information packets on waste reduction.	Describe and illustrate ways to reduce use and increase re-use of materials.	ABAG; SSWMB	Aug.- March 1978.	JPA of ABAG.	\$ 500 ^a (\$5,500 ^a 1978)	\$ 500 ^a (\$5,500 ^a 1978)	State General Fund.	Plan adoption ensures ABAG implementation.
Action 11.3 Introduce classes on waste reduction.	Introduce school classes on waste reduction with assistance provided by SSWMB, ABAG, and local governments.	Local school districts.	Continuing.	Existing.	\$200,000 ^a (\$2,332,000 ^a 1978-2000)	\$200,000 ^a (\$2,332,000 ^a 1978-2000)	State and local funds.	Voluntary.

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS																
<u>Air Quality</u> <ul style="list-style-type: none">o Indirect impact resulting from shift in production practices and transportation patterns. <u>Water Quality</u> <ul style="list-style-type: none">o Indirect impact resulting from shift in production practices and transportation patterns. <u>Physical Resources</u> <ul style="list-style-type: none">o Solid Waste - Increased public awareness of problems related to solid waste. Indirect long-term impact, including reduced demands on landfill capacity, reduced demands on virgin material. <u>Amenities</u> <ul style="list-style-type: none">o No Impact. <u>Energy</u> <ul style="list-style-type: none">o Indirect impact resulting from shift in production practices and transportation patterns.	<u>Financial</u> <ul style="list-style-type: none">o Direct costs-public: (Administrative costs) <u>ABAG-</u> <table><tr><td>1978-2000</td><td>Total</td></tr><tr><td>r= 6-3/8%</td><td>\$14,573</td></tr><tr><td>r= 10%</td><td>\$10,964</td></tr><tr><td></td><td>(\$1250/year)</td></tr></table> <u>SSWMB-</u> <table><tr><td>1978-2000</td><td>Total</td></tr><tr><td>r= 6-3/8%</td><td>\$14,573</td></tr><tr><td>r= 10%</td><td>\$10,964</td></tr><tr><td></td><td>(\$1250/year)</td></tr></table> <ul style="list-style-type: none">o Federal and State governments will have to pay the direct costs of funding the education programs.o Federal and State government agencies will have to bear costs of administering the funds. <u>Institutional</u> <ul style="list-style-type: none">o High degree of public acceptance-school children, businesses and offices and manufacturing industries.o Should beneficially affect public acceptance of future waste reduction programs.	1978-2000	Total	r= 6-3/8%	\$14,573	r= 10%	\$10,964		(\$1250/year)	1978-2000	Total	r= 6-3/8%	\$14,573	r= 10%	\$10,964		(\$1250/year)	<u>Direct Costs-Private</u> <ul style="list-style-type: none">o Indirect impact. <u>Production of Goods and Services</u> <ul style="list-style-type: none">o Employment- Possible benefit due to creation of jobs in developing and conducting the education programs.o Potential significant long term benefit on types of goods produced; Increased public awareness of the ill effects of the "throwaway" ethic; shift in production and marketing practices to encourage production of more durable goods, limit production of excess packaging and throwaway items, and change marketing emphasis. <u>Income and Investment</u> <ul style="list-style-type: none">o Indirect impact. <u>Consumer Expenditures</u> <ul style="list-style-type: none">o Indirect impact.	<u>Housing Supply</u> <ul style="list-style-type: none">o No Impact. <u>Physical Mobility</u> <ul style="list-style-type: none">o No Impact. <u>Health and Safety</u> <ul style="list-style-type: none">o No Impact. <u>Sense of Community</u> <ul style="list-style-type: none">o No Impact. <u>Equity</u> <ul style="list-style-type: none">o No Impact. <u>Urban Patterns</u> <ul style="list-style-type: none">o No Impact.
1978-2000	Total																		
r= 6-3/8%	\$14,573																		
r= 10%	\$10,964																		
	(\$1250/year)																		
1978-2000	Total																		
r= 6-3/8%	\$14,573																		
r= 10%	\$10,964																		
	(\$1250/year)																		
<u>Physical Resources</u> <ul style="list-style-type: none">o Solid Waste- Possible impact by encouraging participation in recycling programs, reinforcing recycling practices, spurring involvement in solid-waste related issues. <p>All other environmental impacts same as Action 11.1.</p>	<u>Financial</u> <ul style="list-style-type: none">o Direct Costs-Public: <u>ABAG-</u> <table><tr><td>1978</td><td>Total</td></tr><tr><td>r= 6-3/8%</td><td>\$ 5452</td></tr><tr><td>r= 10%</td><td>\$ 5273</td></tr></table> <u>Institutional</u> <ul style="list-style-type: none">o Environmental groups including recycling centers would view favorably; positive effect on public acceptance of future programs.	1978	Total	r= 6-3/8%	\$ 5452	r= 10%	\$ 5273	<u>Direct Costs-Private</u> <ul style="list-style-type: none">o Indirect impact. <u>Production of Goods and Services</u> <ul style="list-style-type: none">o Indirect impact. <u>Income and Investments</u> <ul style="list-style-type: none">o Indirect impact. <u>Consumer Expenditures</u> <ul style="list-style-type: none">o Indirect impact.	Same as Action 11.1.										
1978	Total																		
r= 6-3/8%	\$ 5452																		
r= 10%	\$ 5273																		
<u>Physical Resources</u> <ul style="list-style-type: none">o Solid Waste - Short-term - will give students a greater understanding of how disposal and creation of wastes affect the environment.o Medium-term - Information and experiences will filter from schools to homes.1. Could result in reduced use of highly packaged goods, throwaway items, and non-recyclables.2. Participation in resource recovery programs. <p>All other environmental impacts same as Action 11.1.</p>	<u>Financial</u> <ul style="list-style-type: none">o Direct Costs-Public <u>School Districts</u> <table><tr><td>1978-2000</td><td>Total For Region</td></tr><tr><td>r= 6-3/8%</td><td>\$ 2,332,000</td></tr><tr><td>r= 10%</td><td>\$ 1,754,000</td></tr><tr><td></td><td>(\$200,000/year for Region)</td></tr></table> <u>Institutional</u> <ul style="list-style-type: none">o Indirect impact on public acceptance of waste reduction and resource recovery programs due to increased awareness.o These programs would be highly acceptable to environmental groups and possibly to consumer groups.	1978-2000	Total For Region	r= 6-3/8%	\$ 2,332,000	r= 10%	\$ 1,754,000		(\$200,000/year for Region)	<u>Direct Costs-Private</u> <ul style="list-style-type: none">o Indirect impact. <u>Production of Goods and Services</u> <ul style="list-style-type: none">o Indirect impact. <u>Income and Investments</u> <ul style="list-style-type: none">o Indirect impact. <u>Consumer Expenditures</u> <ul style="list-style-type: none">o Long-term Indirect Impact could be reduced expenditures on throwaway items, products in non-recyclable containers.o Preferences for more durable goods and products with less packaging could result.	Same as Action 11.1.								
1978-2000	Total For Region																		
r= 6-3/8%	\$ 2,332,000																		
r= 10%	\$ 1,754,000																		
	(\$200,000/year for Region)																		

SOLID WASTE MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Policy 12								
FEDERAL AND STATE GOVERNMENTS SHOULD ADOPT LEGISLATIVE AND ADMINISTRATIVE CHANGES WHICH PROMOTE WASTE REDUCTION.								
Action 12.1 Change manufacturing standards and regulations, where appropriate.	Changes in standards and regulations of manufacturing may be needed to: <ul style="list-style-type: none"> o reduce excess packaging, o prohibit manufacture of certain products, such as disposable containers, o standardize containers, o limit number of container sizes, o increase service life of products, e.g., appliances, and o design criteria (such as modular components) to make repair more attractive than replacement. 	U.S. Congress and Federal Administration; State legislature and administration.	Continuing.	Federal and State Constitutions.	0	0	State and Federal funds.	After plan approval, EPA, SSWMB, Cities, and counties will adopt recommendations and will advocate changes.
Policy 13								
FACILITATE REGIONWIDE COOPERATION IN DEVELOPING STABLE, ADEQUATE MARKETS FOR SECONDARY MATERIALS.								
Action 13.1 Contact potential buyers.	Interview buyers to get price estimates, quantities, quality and specifications on materials handled.	ABAG.	August-December 1977.	JPA of ABAG.	\$ 400 ^a (\$4,700 ^a 1978)	\$ 400 ^a (\$4,700 ^a 1978)	State and Federal funds.	Plan adoption ensures ABAG implementation.
Action 13.2 Prepare listing of buyers.	Compile a reference of this information for including in manual.	ABAG.	August-December 1977.	JPA of ABAG.	\$ 100 ^a (\$700 ^a 1978)	\$ 100 ^a (\$700 ^a 1978)	State and Federal funds.	Plan adoption ensures ABAG implementation.

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS								
<u>Air Quality</u> <ul style="list-style-type: none">o Indirect impact resulting from shift in production practices and transportation patterns. <u>Water Quality</u> <ul style="list-style-type: none">o Indirect impact resulting from shift in production practices and transportation patterns. <u>Physical Resources</u> <ul style="list-style-type: none">o Solid Wastes - Probable impact - implementation of these changes by industry would reduce quantities of wastes produced in manufacturing practices; reduce generation of packaging materials; make recovery of certain products more feasible; and permit increased use of secondary materials, and products containing secondary materials, in manufacturing processes. <u>Energy</u> <ul style="list-style-type: none">o Indirect impact resulting from shift in production practices and transportation patterns.	<u>Financial</u> <ul style="list-style-type: none">o Direct Costs-Public: The Federal and State governments would bear administrative costs involved in changing standards and regulations; part of regular function. <u>Institutional</u> <ul style="list-style-type: none">o Public acceptance -Changes in certain standards and regulations may be opposed by affected industries.-Environmental groups and organizations (both private and public) involved in resource recovery would view these changes with favour.o Political and organizational feasibility - -Officials with significant urban industrial constituencies may be unwilling to advocate these changes.	<u>Direct Costs - Private</u> <ul style="list-style-type: none">o For compliance with new standards, Industries may bear costs of: -Changes in packaging design -Changes in operational practices, and -Changes in product design. These costs may be offset to some extent by reduced waste disposal costs or may be passed on to the consumer. <u>Production of Goods and Services</u> <ul style="list-style-type: none">o Will alter design and packaging of goods. <u>Income and Investment</u> <ul style="list-style-type: none">o Possible impact on capital investments-some Industries may require new equipment. Impact would be industry-specific. <u>Consumer Expenditures</u> <ul style="list-style-type: none">o Probable increase in cost of some products.	<u>Housing Supply</u> <ul style="list-style-type: none">o No Impact. <u>Physical Mobility</u> <ul style="list-style-type: none">o No Impact. <u>Health and Safety</u> <ul style="list-style-type: none">o No Impact. <u>Sense of Community</u> <ul style="list-style-type: none">o No Impact. <u>Equity</u> <ul style="list-style-type: none">o No Impact. <u>Urban Patterns</u> <ul style="list-style-type: none">o No Impact.								
<u>Air Quality</u> <ul style="list-style-type: none">o No Impact. <u>Water Quality</u> <ul style="list-style-type: none">o No Impact. <u>Physical Resources</u> <ul style="list-style-type: none">o Solid Waste- Possible Increased viability of resource recovery activities if market for secondary goods is established or expanded. <u>Energy</u> <ul style="list-style-type: none">o No impact. <u>Amenities</u> <ul style="list-style-type: none">o No impact.	<u>Financial</u> <ul style="list-style-type: none">o Direct Cost-Public: (Administrative Costs) <table><tr><td colspan="2">ABAG-</td></tr><tr><td>1978</td><td>Total</td></tr><tr><td>r= 6-3/8%</td><td>\$4700</td></tr><tr><td>r= 10%</td><td>\$4545</td></tr></table> <u>Institutional</u> <ul style="list-style-type: none">o Increased acceptability of recycling with potential buyers.o Direct Impact on groups involved in recycling due to Increased awareness and participation by public.	ABAG-		1978	Total	r= 6-3/8%	\$4700	r= 10%	\$4545	<u>Direct Cost-Private</u> <ul style="list-style-type: none">o No Impact. <u>Production of Goods and Services</u> <ul style="list-style-type: none">o Indirect effect of contacting the buyers could be Increased production of goods containing secondary materials. <u>Income and Investments</u> <ul style="list-style-type: none">o No Impact. <u>Consumer Expenditures</u> <ul style="list-style-type: none">o No Impact.	Same as Action 12.1.
ABAG-											
1978	Total										
r= 6-3/8%	\$4700										
r= 10%	\$4545										
Same as Action 13.1.	<u>Financial</u> <ul style="list-style-type: none">o Direct Cost-Public: (Administrative Costs) <table><tr><td colspan="2">ABAG-</td></tr><tr><td>1978</td><td>Total</td></tr><tr><td>r= 6-3/8%</td><td>\$658</td></tr><tr><td>r= 10%</td><td>\$636</td></tr></table> <u>Institutional</u> <ul style="list-style-type: none">o Public Acceptability-Immediate beneficial Impact on current resource recovery operations and on the buyers of secondary materials.	ABAG-		1978	Total	r= 6-3/8%	\$658	r= 10%	\$636	<u>Direct Cost-Private</u> <ul style="list-style-type: none">o No Impact. <u>Production of Goods and Services</u> <ul style="list-style-type: none">o Possible Increase In flow of goods from recycling centers or other resource recovery projects to secondary materials buyers. Possible Impact on production of goods containing secondary materials. <u>Income and Investments</u> <ul style="list-style-type: none">o No Impact. <u>Consumer Expenditures</u> <ul style="list-style-type: none">o No Impact.	Same as Action 12.1.
ABAG-											
1978	Total										
r= 6-3/8%	\$658										
r= 10%	\$636										

SOLID WASTE MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Action 13.3 Provide forum for coordination.	Organize meetings for representatives of recycling centers, local governments, citizen groups, and secondary markets.	ABAG.	Ongoing.	JPA of ABAG.	\$1,600 ^a (\$19,000 ^a 1978-2000)	\$1,600 ^a (\$19,000 ^a 1978-2000)	State and Federal funds.	Plan adoption ensures ABAG implementation.
Policy 14 FEDERAL AND STATE GOVERNMENTS SHOULD ADOPT LEGISLATIVE AND ADMINISTRATIVE CHANGES TO IMPROVE COMPETITIVE POSITIONS OF SECONDARY MATERIALS AND PRODUCTS CONTAINING SECONDARY MATERIALS.								
Action 14.1 Change existing Federal and State laws and regulations to improve competitive positions of secondary materials and products containing secondary materials.	Change existing Federal and State laws and regulations in the following areas: <ul style="list-style-type: none"> o Change tax laws to eliminate favored status of virgin materials. o Introduce Federal surtaxes or disposal charges on prices of virgin materials. o Reform Interstate Commerce Commission's rate structure to establish favorable competitive position for secondary materials. o Require certain percentage of secondary material to be contained in specific products, where feasible, and set maximum permissible quantities of virgin materials in specific products. 	U.S. Congress and Federal administration.	As soon as possible.	Federal and State constitutions.	0	0	Federal and State funds.	After plan approval, EPA, SSWM8, cities, and counties will adopt recommendations and will advocate changes.
Action 14.2 Adopt preferential purchasing policies for secondary materials, where appropriate.	Policies would favour purchase of products containing secondary materials.	ABAG; Regional Agencies; local governments.	As soon as possible.	Local governments enabling legislation.	\$16,000 ^a (\$190,000 ^a 1978)	\$16,000 ^a (\$190,000 ^a 1978)	None needed.	Plan approval by implementing agencies will ensure adoption of policies.

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
<u>Air Quality</u> o No Impact. <u>Water Quality</u> o No Impact. <u>Physical Resources</u> o Could modify solid waste management practices in the long-term; extent of this impact is not quantifiably predictable. <u>Energy</u> o No Impact. <u>Amenities</u> o No Impact.	<u>Financial</u> o Direct Cost-Public: (Administrative Costs) ABAG- 1978-2000 Total r= 6-3/8% \$ 18,654 r= 10% \$ 14,034 (\$1600/year) <u>Institutional</u> o Will directly impact groups and industries involved in resource recovery and in disposal, transportation or collection of municipal solid wastes. Probably be viewed favorably by the various groups and industry. It is a necessary step in modifying solid waste management practices.	<u>Direct Cost-Private</u> o No Impact. <u>Production of Goods and Services</u> o No Impact. <u>Income and Investments</u> o No Impact. <u>Consumer Expenditures</u> o No Impact.	Same as Action 12.1.
<u>Air Quality, Water Quality, Energy</u> o Indirect impact resulting from shift in production practices and transportation patterns. <u>Physical Resources</u> o Direct beneficial impact on solid waste. o Possible expansion of resource recovery programs. o Possible long-term reduction of demands on timber and mineral resources. <u>Amenities</u> o No Impact.	<u>Financial</u> o Direct Costs-Public: Federal and State government agencies would have administrative costs involved in changing laws and regulations; part of normal operations. <u>Institutional</u> o Public Acceptance-viewed favorably by environmental groups, secondary materials industry, and most persons involved in resource recovery. o Industries, particularly the extractive industries would likely be opposed to the change in competitive position of their goods. o Implementation-due to industrial opposition, these recommended changes may be difficult to implement.	<u>Direct Cost-Private</u> o Possible costs of shifting from use of virgin to use of secondary materials. <u>Production of Goods and Services</u> o The change in costs of secondary materials could shift production practices from use of primary materials to use of secondary. <u>Income and Investments</u> o Possible investment in equipment to shift production practices. <u>Consumer Expenditures</u> o Possible impact on prices. Could reduce prices of secondary materials or products containing secondary materials.	Same as Action 12.1.
<u>Air Quality</u> o Indirect impact resulting from shift in production practices and transportation patterns. <u>Water Quality</u> o Indirect impact resulting from shift in production practices and transportation patterns. <u>Physical Resources</u> o Solid Waste - Direct effect on secondary materials markets; would indirectly affect recycling and resource recovery programs. <u>Energy</u> o Indirect impact resulting from shift in production practices and transportation patterns. <u>Amenities</u> o No Impact.	<u>Financial</u> o Direct Costs-Public: (Administrative Costs) <u>Participating Agencies (89)</u> 1978 Total For Region r= 6-3/8% \$ 189,938 r= 10% \$ 183,679 <u>Institutional</u> o Highly acceptable to recyclers and producers of secondary goods. o Could meet with opposition by producers of goods using virgin materials.	<u>Direct Costs-Private</u> o Indirect impact. <u>Production of Goods and Services</u> o Indirect impact. <u>Income and Investments</u> o Indirect impact. <u>Consumer Expenditures</u> o Indirect impact.	Same as Action 12.1.

SOLID WASTE MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Policy 15								
ALL LEVELS OF GOVERNMENTS SHOULD ENCOURAGE DEVELOPMENT OF SOURCE SEPARATION PROGRAMS.								
Action 15.1 Provide information and assistance on source separation.	Facilitate efforts of local governments, citizen groups, and collection companies by offering technical advice, contacting secondary material buyers, and by providing a forum for coordination of these efforts.	ABAG. SSWMB.	Ongoing. Ongoing.	JPA of ABAG. SB-5	\$7,800 ^a (\$91,000 ^a 1978-2000)	\$7,800 ^a (\$91,000 ^a 1978-2000)	Dues, State and Federal grants. State General Funds.	Plan approval will ensure implementation.
Action 15.2 Fund demonstration projects on source separation at the local, State and Federal level.	State and Federal legislatures should provide funding for demonstration source separation and recycling projects.	State and Federal Legislature.	Ongoing.	-	\$254,000 ^a (\$3,000,000 ^a 1978-1982)	\$254,000 ^a (\$3,000,000 ^a 1978-1982)	State and Federal funds.	ABAG, SSWMB, and local governments will advocate funding for demonstration projects.
Action 15.3 Establish office paper recycling program.	Data and experience of the public agency programs would be used to expand recycling into the private sector.	ABAG & other regional agencies; Local gov'ts.	August 77 (ABAG)	JPA of ABAG; \$ 3,900 ^a agencies' enabling legislation.	\$ 3,900 ^a (\$45,000 ^a 1978)	\$ 3,900 ^a (\$45,000 ^a 1978)	Sales of used paper.	ABAG will start a program.
Action 15.4 Adopt resolutions supporting existing community source separation and recycling programs.	These resolutions would: acknowledge on-going efforts (such as voluntary recycling centers, school use of industrial scrap materials (Bay Area Creative Recycle), etc), encourage involvement in these programs and establish policies supporting new programs.	City Councils; Boards of Supervisors; School district boards; County Solid Waste Management Authorities.	As soon as possible.	Local governments enabling legislation.	\$ 900 ^a (\$10,000 ^a 1978)	\$ 900 ^a (\$10,000 ^a 1978)	None needed.	ABAG will advocate.

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS												
<p><u>Air Quality, Water Quality, Energy</u></p> <ul style="list-style-type: none">o Indirect impact resulting from shift in production practices and transportation patterns. <p><u>Physical Resources</u></p> <ul style="list-style-type: none">o Possible indirect benefits-Communities may develop or increase resource recovery activities if provided with information. <p><u>Amenities</u></p> <ul style="list-style-type: none">o No Impact.	<p><u>Financial</u></p> <ul style="list-style-type: none">o Direct Cost-Public: (Administrative Costs) <table><tr><td>ABAG-1978-2000</td><td>Total</td></tr><tr><td>r= 6-3/8%</td><td>\$ 90,938</td></tr><tr><td>r= 10%</td><td>\$ 68,418</td></tr><tr><td></td><td>(\$7800/year)</td></tr></table> <p><u>Institutional</u></p> <ul style="list-style-type: none">o Public Acceptance - Environmental groups and companies or individuals involved in resource recovery should view this action positively.	ABAG-1978-2000	Total	r= 6-3/8%	\$ 90,938	r= 10%	\$ 68,418		(\$7800/year)	<p><u>Direct Cost-Private</u></p> <ul style="list-style-type: none">o Indirect impact. <p><u>Production of Goods and Services</u></p> <ul style="list-style-type: none">o Indirect impact. <p><u>Income and Investments</u></p> <ul style="list-style-type: none">o Indirect impact. <p><u>Consumer Expenditures</u></p> <ul style="list-style-type: none">o Indirect impact.	<p><u>Housing Supply</u></p> <ul style="list-style-type: none">o No Impact. <p><u>Physical Mobility</u></p> <ul style="list-style-type: none">o No Impact. <p><u>Health and Safety</u></p> <ul style="list-style-type: none">o No Impact. <p><u>Sense of Community</u></p> <ul style="list-style-type: none">o Possible indirect impact on sense of community due to common purpose. <p><u>Equity</u></p> <ul style="list-style-type: none">o No Impact. <p><u>Urban Patterns</u></p> <ul style="list-style-type: none">o No Impact.				
ABAG-1978-2000	Total														
r= 6-3/8%	\$ 90,938														
r= 10%	\$ 68,418														
	(\$7800/year)														
<p><u>Physical Resources</u></p> <ul style="list-style-type: none">o Significant impacts in communities with the demonstration projects: 1) reduced waste generation, and 2) increased recycling.o Possible indirect long-term impacts on physical resources. Demands on mineral and timber resources could be reduced. <p>All other environmental impacts are same as Action 15.1.</p>	<p><u>Financial</u></p> <ul style="list-style-type: none">o Direct Costs-Public: (Administrative Costs) <p><u>Funding Agencies</u> (Federal and State Government would pay direct costs of funding the programs.)</p> <table><tr><td>1978-1979</td><td>Total</td></tr><tr><td>r= 6-3/8%</td><td>\$2,953,648</td></tr><tr><td>r= 10%</td><td>\$2,811,574</td></tr><tr><td></td><td>(\$1,620,000 per year for Region)</td></tr></table> <p>ABAG-1978-1983</p> <table><tr><td>r= 6-3/8%</td><td>\$5212</td></tr><tr><td>r= 10%</td><td>\$4738</td></tr></table> <p><u>Institutional</u></p> <ul style="list-style-type: none">o Public Acceptance - Environmental groups and companies or individuals involved in resource recovery should view this action positively.	1978-1979	Total	r= 6-3/8%	\$2,953,648	r= 10%	\$2,811,574		(\$1,620,000 per year for Region)	r= 6-3/8%	\$5212	r= 10%	\$4738	<p><u>Direct Costs-Private</u></p> <ul style="list-style-type: none">o Indirect impact. <p><u>Production of Goods and Services</u></p> <ul style="list-style-type: none">o Employment- Possible increase in jobs in communities with demonstration projects. <p><u>Income and Investments</u></p> <ul style="list-style-type: none">o New programs may require communities to invest in some equipment.o Federal and State support of these programs may encourage private investment in resource recovery operation. <p><u>Consumer Expenditures</u></p> <ul style="list-style-type: none">o Indirect impact.	<p><u>Housing Supply</u></p> <ul style="list-style-type: none">o No Impact. <p><u>Physical Mobility</u></p> <ul style="list-style-type: none">o No Impact. <p><u>Health and Safety</u></p> <ul style="list-style-type: none">o No Impact. <p><u>Sense of Community</u></p> <ul style="list-style-type: none">o Possible impact on sense of community associated with common purpose. <p><u>Equity</u></p> <ul style="list-style-type: none">o Changes in Lifestyle-Community involvement in resource recovery requires some minor changes in daily lifestyle of its residents. <p><u>Urban Patterns</u></p> <ul style="list-style-type: none">o No Impact.
1978-1979	Total														
r= 6-3/8%	\$2,953,648														
r= 10%	\$2,811,574														
	(\$1,620,000 per year for Region)														
r= 6-3/8%	\$5212														
r= 10%	\$4738														
<p><u>Physical Resources</u></p> <ul style="list-style-type: none">o Minor impact by reduction of total amount of waste that requires disposal.o Potential long-term impact of reducing demands on timber resources. <p>All other environmental impacts are same as Action 15.1.</p>	<p><u>Financial</u></p> <ul style="list-style-type: none">o Direct Cost-Public: (Administrative Costs) <p><u>Participating Agencies (80)-</u></p> <table><tr><td>1978</td><td>Total</td></tr><tr><td>r= 6-3/8%</td><td>\$ 44,935</td></tr><tr><td>r= 10%</td><td>\$ 43,455</td></tr></table> <p><u>Institutional</u></p> <ul style="list-style-type: none">o Public Acceptability - Possible indirect impact if program is perceived as a nuisance by staff.o Increased public awareness of recycling; future programs more acceptable.	1978	Total	r= 6-3/8%	\$ 44,935	r= 10%	\$ 43,455	<p><u>Direct Cost-Private</u></p> <ul style="list-style-type: none">o No Impact. <p><u>Production of Goods and Services</u></p> <ul style="list-style-type: none">o Could alter production practices to favor greater use of secondary fibers. <p><u>Income and Investments</u></p> <ul style="list-style-type: none">o No Impact. <p><u>Consumer Expenditures</u></p> <ul style="list-style-type: none">o May slightly reduce demand for new paper in the long term.	<p><u>Housing Supply</u></p> <ul style="list-style-type: none">o No Impact. <p><u>Physical Mobility</u></p> <ul style="list-style-type: none">o No Impact. <p><u>Health and Safety</u></p> <ul style="list-style-type: none">o No Impact. <p><u>Sense of Community</u></p> <ul style="list-style-type: none">o No Impact. <p><u>Equity</u></p> <ul style="list-style-type: none">o No Impact. <p><u>Urban Patterns</u></p> <ul style="list-style-type: none">o No Impact.						
1978	Total														
r= 6-3/8%	\$ 44,935														
r= 10%	\$ 43,455														
<p><u>Physical Resources</u></p> <ul style="list-style-type: none">o More immediate, direct benefits may accrue to current recycling efforts in form of increased participation, increased publicity, and increased acceptance. <p>All other environmental impacts are same as Action 15.1.</p>	<p><u>Financial</u></p> <ul style="list-style-type: none">o Direct Costs-Public: (Administrative Costs) <p><u>Local Governments (50) -</u></p> <table><tr><td>1978</td><td>Total</td></tr><tr><td>r= 6-3/8%</td><td>\$ 10,247</td></tr><tr><td>r= 10%</td><td>\$ 9,909</td></tr><tr><td></td><td>(about \$200 per agency)</td></tr></table> <p><u>Institutional</u></p> <ul style="list-style-type: none">o Public Acceptance - Positive effect on public acceptance of concept of recycling.	1978	Total	r= 6-3/8%	\$ 10,247	r= 10%	\$ 9,909		(about \$200 per agency)	<p>Same as Action 15.1.</p>	<p>Same as Action 15.1.</p>				
1978	Total														
r= 6-3/8%	\$ 10,247														
r= 10%	\$ 9,909														
	(about \$200 per agency)														

SOLID WASTE MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Policy 16								
ADEQUATE PLANNING FOR HAZARDOUS WASTE MANAGEMENT REQUIRES ACCURATE DATA.								
Action 16.1 Conduct surveys of hazardous industrial wastes.	Survey the amount of hazardous industrial waste currently being generated, what these materials are and how they are currently being disposed of.	Counties with assistance from State Dept. of Health and ABAG.	By April 1978.	RCRA Sec. 3002(6) State Hazardous Waste Control Act.	\$ 6,400 ^a (\$75,000 ^a 1978-79) \$1,400 ^b (\$16,000 ^b 1978-79)	\$ 6,400 ^a (\$75,000 ^a 1978-79) \$1,400 ^b (\$16,000 ^b 1978-79)	RCRA; SWMB; BASWMP Phase II; local matching funds (incl. in-kind services).	After plan approval, cities and counties will adopt recommendations; Agreement to be negotiated between ABAG and State Health Dept.
Action 16.2 Conduct surveys of hazardous hospital wastes.	Survey the amount of infectious or pathological waste currently being generated, what these materials are, and how they are currently being disposed of.	Counties with assistance of State Health Dept. and ABAG.	By April 1980.	Proposed State Hazardous Waste Control Act Amendments.	\$ 400 ^a (\$4,900 ^a 1979-80) \$100 ^b (\$900 ^b 1979-80)	\$ 400 ^a (\$4,900 ^a 1979-80) \$100 ^b (\$900 ^b 1979-80)	RCRA; SWMB; BASWMP Phase II; with local matching funds (incl. in-kind services).	Agreement to be negotiated between ABAG and State Health Dept.

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS																		
<u>Air Quality</u> o No impact. <u>Water Quality</u> o No impact. <u>Physical Resources</u> o Possible indirect impacts due to ability to determine need for future Class 1 sites. o Indirect impact-possible decrease in illegal dumping of hazardous wastes. <u>Energy</u> o No impact. <u>Amenities</u> o No impact.	<u>Financial</u> o Direct Cost-Public: (Administrative and regulatory costs) <u>State Dept. of Health-</u> <table><tr><td>1978-1979</td><td>Total</td></tr><tr><td>r= 6-3/8%</td><td>\$ 16,013</td></tr><tr><td>r= 10%</td><td>\$ 15,238</td></tr></table> <u>Counties (9)</u> <table><tr><td>1978-1979</td><td>Total</td></tr><tr><td>r= 6-3/8%</td><td>\$ 59,456</td></tr><tr><td>r= 10%</td><td>\$ 56,579</td></tr></table> <u>Institutional</u> o Direct Impact on Industrial generators of hazardous wastes due to perceived intrusion into industry practices. o Minor temporary impact on County staff due to staff commitment to conduct surveys.	1978-1979	Total	r= 6-3/8%	\$ 16,013	r= 10%	\$ 15,238	1978-1979	Total	r= 6-3/8%	\$ 59,456	r= 10%	\$ 56,579	<u>Direct Cost-Private</u> o Minor temporary interruption in normal operations to supply information to County surveyors. <u>Hazardous Waste Generators-</u> <table><tr><td>1978-1979</td><td>Total</td></tr><tr><td>r= 6-3/8%</td><td>\$ 16,013</td></tr><tr><td>r= 10%</td><td>\$ 15,238</td></tr></table> <u>Production of Goods and Services</u> o No impacts. <u>Income and Investments</u> o No impact. <u>Consumer Expenditures</u> o No impact.	1978-1979	Total	r= 6-3/8%	\$ 16,013	r= 10%	\$ 15,238	<u>Housing Supply</u> o No impact. <u>Physical Mobility</u> o No impact. <u>Health and Safety</u> o Possibility of indirectly leading to less contact with dangerous materials. <u>Sense of Community</u> o No impact. <u>Equity</u> o No impact. <u>Urban Patterns</u> o No impact.
1978-1979	Total																				
r= 6-3/8%	\$ 16,013																				
r= 10%	\$ 15,238																				
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r= 6-3/8%	\$ 59,456																				
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r= 6-3/8%	\$ 16,013																				
r= 10%	\$ 15,238																				
<u>Physical Resources</u> o Indirect minor impacts due to greater preprocessing for disposal to sewers and therefore reduce use of landfill sites. All other environmental impacts same as Action 16.1.	<u>Financial</u> o Direct Cost-Public: (Administrative Costs) <u>State Dept. of Health</u> <table><tr><td>1979-1980</td><td>Total</td></tr><tr><td>r= 6-3/8%</td><td>\$ 2006</td></tr><tr><td>r= 10%</td><td>\$ 1863</td></tr></table> <u>Counties-</u> <table><tr><td>1979-1980</td><td>Total</td></tr><tr><td>r= 6-3/8%</td><td>\$ 2856</td></tr><tr><td>r= 10%</td><td>\$ 2629</td></tr></table> <u>Institutional</u> o Direct Impact on hospital administrators due to perceived inconvenience of supplying information. o Impact on legal capability since requires amendment to State Hazardous Waste Control Act (In process). o Direct temporary impact on allocation of staff due to staff commitment to conduct surveys.	1979-1980	Total	r= 6-3/8%	\$ 2006	r= 10%	\$ 1863	1979-1980	Total	r= 6-3/8%	\$ 2856	r= 10%	\$ 2629	<u>Direct Cost-Private</u> o Minor temporary interruption in normal operations to supply information to County surveyors. <u>Hospital Administrators-</u> <table><tr><td>1979-1980</td><td>Total</td></tr><tr><td>r= 6-3/8%</td><td>\$ 857</td></tr><tr><td>r= 10%</td><td>\$ 789</td></tr></table> All other economic impacts same as Action 16.1.	1979-1980	Total	r= 6-3/8%	\$ 857	r= 10%	\$ 789	Same as Action 16.1.
1979-1980	Total																				
r= 6-3/8%	\$ 2006																				
r= 10%	\$ 1863																				
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SOLID WASTE MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Action 16.3 Determine whether there is a need for additional Class I site capacity	Determine whether or not additional Class I sites are needed in the Bay Area. Determine waste quantities that can be handled at each existing Class I site.	Counties with assistance from ABAG and State Dept. of Health.	Ongoing.	Clarifying legislation needed.	\$ 1,800 ^a (\$21,000 ^a 1979)	\$ 1,800 ^a (\$21,000 ^a 1979)	SWMB Grant.	After plan approval cities and counties will adopt recommendations.
Policy 17 WASTE REDUCTION, SOURCE SEPARATION, AND RECOVERY OF HAZARDOUS INDUSTRIAL WASTES SHOULD BE PROMOTED IN THE INTEREST OF LIMITING LAND DISPOSAL.								
Action 17.1 Encourage waste reduction.	Encourage industry to make changes in its processes to reduce the amount of hazardous waste generated.	ABAG, State Dept. of Health and RWQCB.	Ongoing.	Clarification.	\$13,000 ^a (\$152,000 ^a 1978-2000)	\$13,000 ^a (\$152,000 ^a 1978-2000)	RCRA; State funds.	Agreement to be negotiated between ABAG and State Health Dept.

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS												
<p>(Impacts are contingent on the determination that a site is needed. Also impacts are site specific).</p> <p><u>Air Quality</u></p> <ul style="list-style-type: none">o Indirect impact; solar evaporation ponds may have some odor. Extent of the odor depends on how well the site is operated. Burial activities may lead to increased dust. <p><u>Water Quality</u></p> <ul style="list-style-type: none">o Indirect impact if site is established to replace an existing site with water quality problems. <p><u>Physical Resources</u></p> <ul style="list-style-type: none">o There may be indirect impacts on flora and fauna, agricultural land, mineral extraction and timber lands. Effects could be minimized in the site selection process.o Indirect impacts due to shifts in the routes traveled by waste trucks, need for a new transfer station, and volumes of waste disposed of at existing Class I sites. <p><u>Energy</u></p> <ul style="list-style-type: none">o No impact. <p><u>Amenities</u></p> <ul style="list-style-type: none">o Reduction of the visual amenities of the chosen site.o Site preparation activities, traffic associated with disposal, and on-site operations would result in increased noise levels.	<p><u>Financial</u></p> <ul style="list-style-type: none">o Direct Cost-Public: (Administrative Costs) <p><u>ABAG-</u></p> <table><tr><td>1979</td><td>Total</td></tr><tr><td>r= 6-3/8%</td><td>\$ 4419</td></tr><tr><td>r= 10%</td><td>\$ 4132</td></tr></table> <p><u>Counties (9)</u></p> <table><tr><td>1979</td><td>Total For Region</td></tr><tr><td>r= 6-3/8%</td><td>\$16,567</td></tr><tr><td>r= 10%</td><td>\$15,493</td></tr></table> <ul style="list-style-type: none">o If financed publicly, site may be financed by local government bonds or increases in property taxes.o If the site is private, it will establish an additional industry to be taxed.o Probable revenue to the jurisdiction from development and construction fees. <p><u>Institutional</u></p> <ul style="list-style-type: none">o Unknown indirect impact on existing Class I site operators due to competition and a possible major reaction of communities and environmental groups depending on the location of site(s) which will lead to poor public acceptability.o ABAG and Counties may have difficulties in making this decision due to its sensitive nature.o County staff may be shifted from other duties to work on this study.	1979	Total	r= 6-3/8%	\$ 4419	r= 10%	\$ 4132	1979	Total For Region	r= 6-3/8%	\$16,567	r= 10%	\$15,493	<p><u>Direct Cost-Private</u></p> <ul style="list-style-type: none">o No impact. <p><u>Production of Goods and Services</u></p> <ul style="list-style-type: none">o Indirect impact on the number and location of industries that depend on Class I sites for disposal of their hazardous wastes.o Employment - Temporary construction employment and more permanent employment in operating the site could result. <p><u>Income and Investments</u></p> <ul style="list-style-type: none">o Property chosen for site could increase in value; surrounding property could decrease in value.o Indirect impact on capital investments by requiring an investment in land and equipment for Class I sites by the owner or operator of the facility(s).o Possible indirect impact on the profits of existing competing Class I site owners and operators since revenue would be spread to include the new site(s). <p><u>Consumer Expenditures</u></p> <ul style="list-style-type: none">o Indirect impact on disposal rates at Class I sites related to profits of site owners and operators.	<p><u>Health and Safety</u></p> <ul style="list-style-type: none">o The decision would help ensure disposal capacity of Group 1 (hazardous) wastes and therefore have an indirect, moderate, beneficial impact on public health. <p><u>Urban Patterns</u></p> <ul style="list-style-type: none">o Possible indirect impact on land use by restricting use of site and adjacent areas. <p>All other social impacts same as Action 16.1.</p>
1979	Total														
r= 6-3/8%	\$ 4419														
r= 10%	\$ 4132														
1979	Total For Region														
r= 6-3/8%	\$16,567														
r= 10%	\$15,493														
<p><u>Air Quality</u></p> <ul style="list-style-type: none">o There will be an indirect impact on dust and odors due to reduced need for land disposal. <p><u>Water Quality</u></p> <ul style="list-style-type: none">o There may be an indirect impact on water quality due to reduced need for land disposal. <p><u>Physical Resources</u></p> <ul style="list-style-type: none">o Direct impact on solid waste by industrial practices, thereby reducing wastes.o Indirect impacts on solid waste by reducing quantity of hazardous wastes generated, by reducing volume required for storage, collection, and hauling, by prolonging life of existing Class I sites and reducing need for additional sites.o Possible indirect impact on raw materials due to reduced consumption. <p><u>Energy</u></p> <ul style="list-style-type: none">o Possible changes in the use of energy. Impact cannot be predicted. <p><u>Amenities</u></p> <ul style="list-style-type: none">o No impact.	<p><u>Financial</u></p> <ul style="list-style-type: none">o Direct Cost-Public: <p><u>ABAG-</u></p> <table><tr><td>1978-2000</td><td>Total</td></tr><tr><td>r= 6-3/8%</td><td>\$ 29,147</td></tr><tr><td>r= 10%</td><td>\$ 21,929</td></tr></table> <p>(staff time - \$2,500/year)</p> <p><u>State Department of Health-</u></p> <table><tr><td>1978-2000</td><td>Total</td></tr><tr><td>r= 6-3/8%</td><td>\$ 122,416</td></tr><tr><td>r= 10%</td><td>\$ 92,101</td></tr></table> <p>(staff time - \$10,000/year)</p> <p><u>Institutional</u></p> <ul style="list-style-type: none">o May be unpopular with generators due to perceived costs and reluctance to change; popular with environmental groups.o Legal capability of the State Dept. of Health to aggressively encourage waste reduction is uncertain.o Direct impact on State Health Dept. staff due to staff commitment to help industry.o Direct impact on solid waste by changing industrial practices, thereby reducing wastes.	1978-2000	Total	r= 6-3/8%	\$ 29,147	r= 10%	\$ 21,929	1978-2000	Total	r= 6-3/8%	\$ 122,416	r= 10%	\$ 92,101	<p><u>Direct Cost-Private</u></p> <ul style="list-style-type: none">o Indirect short-term cost of modifying processes and plants; long-term reduction of disposal costs. <p><u>Production of Goods and Services</u></p> <ul style="list-style-type: none">o Short-term indirect impact as process changes are made; long-term impact as savings are realized. <p><u>Income and Investment</u></p> <ul style="list-style-type: none">o Possible minor to significant investments by industry in new equipment depending on commitment to waste reduction and type of process involved.o Possible short-term reduction of profits due to investments and long-term increases in profit due to reduction of disposal fees for industrial generators of hazardous wastes. <p><u>Consumer Expenditures</u></p> <ul style="list-style-type: none">o Possible indirect benefits in cost savings for consumer.	<p><u>Housing Supply</u></p> <ul style="list-style-type: none">o No impact. <p><u>Physical Mobility</u></p> <ul style="list-style-type: none">o No impact. <p><u>Health and Safety</u></p> <ul style="list-style-type: none">o Indirect impact on public health by reducing the amount of hazardous wastes to be managed. <p><u>Sense of Community</u></p> <ul style="list-style-type: none">o No impact. <p><u>Equity</u></p> <ul style="list-style-type: none">o No impact. <p><u>Urban Patterns</u></p> <ul style="list-style-type: none">o No impact.
1978-2000	Total														
r= 6-3/8%	\$ 29,147														
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SOLID WASTE MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Action 17.2 Encourage source separation.	Encourage industry to avoid mixing wastes to facilitate recycling.	State Health Dept.; ABAG.	Ongoing.	Clarification needed.	\$13,000 ^a (\$152,000 ^a 1978-2000)	\$13,000 ^a (\$152,000 ^a 1978-2000)	RCRA; State funds.	Agreement to be negotiated between ABAG and State Health Dept.
Action 17.3 Encourage resource recovery.	Provide incentives to industry for resource recovery, such as: o low interest loans for new equipment o a State-wide waste exchange and marketing system o Information dissemination through business associations o written specifications for recycling materials. o charges to dispose of materials at Class I sites with exemptions for installations with recovery equipment.	Congress, EPA, State Legislature: State Health Dept.; SWMB. State Health Dept. ABAG; State Health Dept. State Health Dept. State Health Dept.	Ongoing. Ongoing. Ongoing. Ongoing. Ongoing.	U.S. Constitution, State Constitution and: State Health Dept., RCRA & State Hazardous Waste Control Act. SWMB; RCRA & SB 5. ABAG: HUD designation as regional planning agency; OMB Circular A-95 designation, Section 208 of the FWPCA Amendments. Enabling Legislation needed.	\$18,000 ^a (\$181,000 ^a 1978-2000)	\$18,000 ^a (\$181,000 ^a 1978-2000)	RCRA and CPCFA funds. RCRA; State funds. State funds. RCRA; State funds. RCRA; State funds.	Agreements to be negotiated between ABAG and State Health Dept. and the Solid Waste Management Board to ensure implementation.

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS																								
<u>Physical Resources</u> <ul style="list-style-type: none">o Direct impact on solid waste by changing industrial operating practices thereby encouraging separation of wastes.o Indirect impacts on solid waste may alter the way hazardous wastes are collected, increase the amount of recovered materials available, increase the life of existing Class 1 sites, reduce the need for more Class 1 sites.o Possible reduction in consumption of raw materials. All other environmental impacts same as Action 17.1.	<u>Financial</u> <ul style="list-style-type: none">o Direct Cost-Public: <u>ABAG-</u><table><tr><td>1978-2000</td><td>Total</td></tr><tr><td>r= 6-3/8%</td><td>\$ 29,147</td></tr><tr><td>r= 10%</td><td>\$ 21,929</td></tr><tr><td>(staff time - \$2,500/year)</td><td></td></tr></table> <u>State Department of Health-</u><table><tr><td>1978-2000</td><td>Total</td></tr><tr><td>r= 6-3/8%</td><td>\$ 122,416</td></tr><tr><td>r= 10%</td><td>\$ 92,101</td></tr><tr><td>(staff time - \$10,000/year)</td><td></td></tr></table> <u>Institutional</u> <ul style="list-style-type: none">o Same as Action 17.1.	1978-2000	Total	r= 6-3/8%	\$ 29,147	r= 10%	\$ 21,929	(staff time - \$2,500/year)		1978-2000	Total	r= 6-3/8%	\$ 122,416	r= 10%	\$ 92,101	(staff time - \$10,000/year)		<u>Production of Goods and Services</u> <ul style="list-style-type: none">o Indirect impact on production since it may result in greater use of recycled materials.o Employment- Indirect impact on employment due to slight increase in time spent in separating materials. <u>Income and Investment</u> <ul style="list-style-type: none">o Indirect impacts on capital since may result in small investment to purchase facilities to collect and store recyclable wastes separately.o Possible short-term reduction of profits due to necessary investments; long-term increases from decreased costs for disposal and for raw materials. All other economic impacts same as Action 17.1.	Same as Action 17.1.								
1978-2000	Total																										
r= 6-3/8%	\$ 29,147																										
r= 10%	\$ 21,929																										
(staff time - \$2,500/year)																											
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r= 6-3/8%	\$ 122,416																										
r= 10%	\$ 92,101																										
(staff time - \$10,000/year)																											
<u>Physical Resources</u> <ul style="list-style-type: none">o Direct impact on solid waste by changing industrial operating practices thereby encouraging resource recovery.o Indirect impacts on solid waste--since may alter the amount of waste going to landfills, may require additional source separation, may increase the life of existing Class 1 sites, may reduce the need for more Class 1 sites.o Possible reduction in consumption of raw materials. All other environmental impacts same as Action 17.1.	<u>Financial</u> <ul style="list-style-type: none">o Direct Cost-Public: (Administrative and regulatory costs) <u>ABAG-</u><table><tr><td>1978-2000</td><td>Total</td></tr><tr><td>r= 6-3/8%</td><td>\$ 29,147</td></tr><tr><td>r= 10%</td><td>\$ 21,929</td></tr><tr><td>(staff time - \$2,500/year)</td><td></td></tr></table> <u>State Department of Health</u><table><tr><td>1978-2000</td><td>Total</td></tr><tr><td>r= 6-3/8%</td><td>\$ 122,416</td></tr><tr><td>r= 10%</td><td>\$ 92,101</td></tr><tr><td>(staff time - \$10,000/year)</td><td></td></tr></table> <u>SSWMB</u><table><tr><td>1978-2000</td><td>Total</td></tr><tr><td>r= 6-3/8%</td><td>\$ 58,293</td></tr><tr><td>r= 10%</td><td>43,858</td></tr><tr><td>(staff time - \$5,000/year)</td><td></td></tr></table> <u>Institutional</u> <ul style="list-style-type: none">o Unpopular with generators due to perceived costs and reluctance to change; popular with environmentalists; any tax law changes could be controversial.o Possibly complex to implement. Measures may require the initiative of <u>three</u> implementing agencies.o Some incentives may require enabling legislation. (Especially any tax law changes.)o Direct impact on SHD, SSWMB, and ABAG staff due to commitment to help industry.	1978-2000	Total	r= 6-3/8%	\$ 29,147	r= 10%	\$ 21,929	(staff time - \$2,500/year)		1978-2000	Total	r= 6-3/8%	\$ 122,416	r= 10%	\$ 92,101	(staff time - \$10,000/year)		1978-2000	Total	r= 6-3/8%	\$ 58,293	r= 10%	43,858	(staff time - \$5,000/year)		<u>Direct Cost-Private</u> <ul style="list-style-type: none">o Same as Action 17.1. <u>Production of Goods and Services</u> <ul style="list-style-type: none">o Indirect impact on production due to less use of virgin materials.o Employment- Indirect impacts on employment by slightly increasing jobs at resource recovery facilities and decreasing jobs in production of virgin materials- possible net job increase. <u>Income and Investments</u> <ul style="list-style-type: none">o Indirect impacts on capital since results in purchasing resource recovery facilities by industries that generate hazardous wastes.o Possible short-term reduction of profits due to investments; long-term increases from decreased costs for disposal and for raw materials. <u>Consumer Expenditures</u> <ul style="list-style-type: none">o Unknown indirect impact on cost related to indirect cost to industry.o Less virgin materials; more reclaimed materials (indirect).	Same as Action 17.1.
1978-2000	Total																										
r= 6-3/8%	\$ 29,147																										
r= 10%	\$ 21,929																										
(staff time - \$2,500/year)																											
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SOLID WASTE MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Action 17.4 Investigate the consolidation of hazardous wastes for processing.	Investigate the possibility of waste consolidation to facilitate waste processing and recovery.	State Health Dept.; ABAG.	Ongoing.	JPA of ABAG.	\$ 3,000 ^a (\$30,000 ^a 1979)	\$ 3,000 ^a (\$30,000 ^a 1979)	RCRA; State funds.	Agreement to be negotiated between ABAG and State Health Dept.
Policy 18 REGULATIONS SHOULD ENSURE SAFE AND PROPER HANDLING OF HAZARDOUS WASTES.								
Action 18.1 Enforce proper labeling requirements.	Require that containers used for the storage, transport, or disposal of hazardous waste accurately identify their contents.	EPA; State Health Dept.	Ongoing.	RCRA Sec. 3002 (2); State Hazardous Waste Control Act.	NA	0	RCRA; State funds.	Required by existing Statute; EPA will enforce.
Action 18.2 Enforce adequate storage facilities requirements.	Require that containers used for onsite storage and for disposal be made of proper materials and designed so as to minimize the hazards of leaking or breaking.	EPA; State Health Dept.	Ongoing.	RCRA Sec. 3002 (3); State Hazardous Waste Control Act.	NA	0	RCRA; State funds.	Required by existing Statute; EPA will enforce.
Action 18.3 Enforcement requirements for adequate record-keeping practices by waste generators.	Require that recordkeeping practices accurately identify the type and the quantity of hazardous waste generated.	EPA; State Health Dept.		RCRA Sec. 3002 (1).	NA	0	RCRA; State funds.	Required by existing Statute; EPA will enforce.

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
<u>Air Quality</u> o No impact. <u>Water Quality</u> o No impact. <u>Physical Resources</u> o Indirect impacts on solid waste may include increased feasibility of resource recovery, more pilot programs, decreased amount of hazardous wastes going to Class 1 sites (thereby increasing the life of existing sites and reducing the need for new sites). o Indirect impacts may include necessitating changes in collection and transportation systems. <u>Energy</u> o No impact. <u>Amenities</u> o No impact.	<u>Financial</u> o Direct Cost-Public: (Administrative costs) ABAG- 1979 Total r= 6-3/8% \$ 2209 r= 10% \$ 2066 <u>Department of Health</u> 1979 Total r= 6-3/8% \$ 27,838 r= 10% \$ 26,033 <u>Institutional</u> o The legal capability of the State Health Department and ABAG to conduct an <u>in depth</u> study is uncertain. o Direct impact on allocation of State Health Department and ABAG staff due to commitment to help industry.	<u>Direct Cost-Private</u> o No impact. <u>Production of Goods and Services</u> o No impact. <u>Income and Investment</u> o No impact. <u>Consumer Expenditures</u> o No impact.	<u>Housing Supply</u> o No impact. <u>Physical Mobility</u> o No impact. <u>Health and Safety</u> o No impact. <u>Equity</u> o No impact. <u>Sense of Community</u> o No impact. <u>Urban Patterns</u> o No impact.
<u>Air Quality</u> o No impact. <u>Water Quality</u> o No impact. <u>Physical Resources</u> o Direct impact on solid waste. Less likelihood of accidents or human error in storage, handling or disposal of hazardous wastes; eases clean-up should spill occur during transport. o Indirect benefit for source separation programs. <u>Energy</u> o No impact. <u>Amenities</u> o No impact.	<u>Financial</u> o Direct Cost-Public: Enforcing proper labeling; EPA and State Health Department staff time. (Standards have not been set; cost estimates not available.) <u>Institutional</u> o Direct impact on public acceptance; unpopular with some generators of hazardous wastes due to costs of compliance.	<u>Direct Cost-Private</u> o Cost of labels, when needed <u>Production of Goods and Services</u> o No impact. <u>Income and Investment</u> o Direct impact on investment for labeling equipment if needed. <u>Consumer Expenditures</u> o No impact.	<u>Housing Supply</u> o No impact. <u>Physical Mobility</u> o No impact. <u>Health and Safety</u> o Indirect impact on public health; increases safety in handling of wastes by decreasing the likelihood of accidents and mistakes during handling. <u>Equity</u> o No impact. <u>Sense of Community</u> o No impact. <u>Urban Patterns</u> o No impact.
<u>Air Quality</u> o May have effect on reducing odor and dust. <u>Water Quality</u> o No impact. <u>Physical Resources</u> o Direct impact on solid waste; increases safety of storage conditions. <u>Energy</u> o No impact. <u>Amenities</u> o No impact.	<u>Financial</u> o Direct Cost-Public: enforcing requirement; EPA and State Health Department staff time. (Standards have not yet been set; cost estimates not available.) <u>Institutional</u> o Direct impact on public acceptance unpopular with some generators of hazardous wastes due to costs of compliance; more likely to affect small industries (since most large generators already have adequate facilities.)	<u>Direct Cost-Private</u> o Cost of better storage facilities, when needed. <u>Production of Goods and Services</u> o No impact. <u>Income and Investment</u> o Direct impact on investment for purchasing and installing new storage facilities, when needed. <u>Consumer Expenditures</u> o No impact.	<u>Health and Safety</u> o Indirect impact on public health since increases safety while storing wastes by reducing likelihood of unwanted contact with hazardous substances All other social impacts same as Action 18.1.
<u>Physical Resources</u> o Direct impact on solid waste management by providing better data. o Indirect impacts; may result in decreased illegal disposal and more waste going to Class 1 sites. All other environmental impacts same as Action 18.1.	<u>Financial</u> o Direct Cost-Public: Enforcing requirement; EPA and State Health Department staff time. (Standards have not yet been set; cost estimates not available.) <u>Institutional</u> o Same as Action 18.1.	<u>Direct Cost-Private</u> o Cost of staff time and supplies to keep better records. <u>Production of Goods and Services</u> o Employment-Indirect impact on employment since may create a very small number of jobs in larger companies. <u>Income and Investment</u> o No impact. <u>Consumer Expenditures</u> o No impact.	<u>Health and Safety</u> o Minor indirect beneficial impact on public health; may decrease the likelihood of illegal disposal. All other social impacts same as Action 18.1.

SOLID WASTE MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Action 18.4 Improve procedures for handling spills of hazardous wastes.	a) Provide for training of firemen in proper procedures for handling spills in County Emergency Services Plans.	County Offices of Emergency Services.	Ongoing.	Local resolutions, as appropriate.	\$ 1,200 ^a (\$14,000 ^a 1979)	\$ 1,200 ^a (\$14,000 ^a 1979)	State funds, DOT.	After plan approval, cities & counties will adopt recommendations.
	b) Designate a single responsible agency for each county for notification and handling of spills, such as the County Office of Emergency Services or the County Health Dept.	County & cities for each county.	Ongoing.	Local resolutions as appropriate.			Local funds.	
Action 18.5 Ensure proper handling of <u>hospital wastes</u> .	Require that infectious or pathological wastes from hospitals be disposed through incineration or processed for disposal to sewers.	State Health Dept.	Completed by April 1980.	Proposed State Hazardous Waste Control Act Amendments.	\$ 2,900 ^a (\$33,000 ^a 1980-2000)	\$ 2,900 ^a (\$33,000 ^a 1980-2000)	RCRA; State funds.	State Health dept. will implement.

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS												
<u>Water Quality</u> <ul style="list-style-type: none">o Indirect impact. Reduces likelihood of hazardous materials being washed into sewers or allowed to run off in next storm.	<u>Financial</u> <ul style="list-style-type: none">o Direct Cost - public: (Administrative costs) <u>Counties and Cities (101) -</u> <table><tr><td>1979</td><td>Total for Region</td></tr><tr><td>r= 6-3/8%</td><td>\$9729</td></tr><tr><td>r= 10%</td><td>\$9098</td></tr></table> <u>County Offices of Emergency Services (9)</u> <table><tr><td>1979</td><td>Total for Region</td></tr><tr><td>r= 6-3/8%</td><td>\$4335</td></tr><tr><td>r= 10%</td><td>\$4054</td></tr></table>	1979	Total for Region	r= 6-3/8%	\$9729	r= 10%	\$9098	1979	Total for Region	r= 6-3/8%	\$4335	r= 10%	\$4054	<u>Direct Cost - Private</u> <ul style="list-style-type: none">o No impact. <u>Production of Goods and Services</u> <ul style="list-style-type: none">o No impact. <u>Income and Investment</u> <ul style="list-style-type: none">o No impact. <u>Consumer Expenditures</u> <ul style="list-style-type: none">o No impact.	<u>Health and Safety</u> <ul style="list-style-type: none">o Indirect impact on public health by decreasing possibility of harm from spills both for persons responsible for clean-up and for the general public. All other social impacts are same as Action 18.1.
1979	Total for Region														
r= 6-3/8%	\$9729														
r= 10%	\$9098														
1979	Total for Region														
r= 6-3/8%	\$4335														
r= 10%	\$4054														
<u>Physical Resources</u> <ul style="list-style-type: none">o Direct impact on operations of transportation systems by improving safety since proper procedure for handling spills is known should a spill occur. All other environmental impacts are same as Action 18.1.	<u>Institutional</u> <ul style="list-style-type: none">o Direct impact on legal capability since requires nine separate resolutions.o Direct temporary impacts on allocation of local staff for firemen to obtain necessary training, emergency personnel to make changes in emergency plans, and staff to prepare resolutions.														
<u>Air Quality</u> <ul style="list-style-type: none">o Appropriate incineration would need to be monitored.	<u>Financial</u> <ul style="list-style-type: none">o Direct Cost - Public: (Administrative and regulatory costs) <u>State Department of Health</u> <table><tr><td>1980-2000</td><td>Total</td></tr><tr><td>r= 6-3/8%</td><td>\$33,417</td></tr><tr><td>r= 10%</td><td>\$24,182</td></tr></table> (Development and enforcement of requirements)	1980-2000	Total	r= 6-3/8%	\$33,417	r= 10%	\$24,182	<u>Direct Cost - Private</u> <ul style="list-style-type: none">o Cost of hospital staff time for preprocessing and occasional new equipment. <u>Production of Goods and Services</u> <ul style="list-style-type: none">o Employment - Indirect impact on employment; temporarily to install any needed facilities; permanent to help with preprocessing. <u>Income and Investment</u> <ul style="list-style-type: none">o Indirect impact due to capital required for new equipment and facilities. <u>Consumer Expenditures</u> <ul style="list-style-type: none">o Possible indirect impact due to increased cost to patients for hospital care.	<u>Health and Safety</u> <ul style="list-style-type: none">o Indirect impact on public health; decreases possibility of accidental contact with pathological or infectious wastes. All other social impacts same as Action 18.1.						
1980-2000	Total														
r= 6-3/8%	\$33,417														
r= 10%	\$24,182														
<u>Water Quality</u> <ul style="list-style-type: none">o Should ensure better treatment of infectious materials than landfill disposal.															
<u>Physical Resources</u> <ul style="list-style-type: none">o Direct impact on solid waste management; better preprocessing so can be incinerated or disposed of to sewers.o Indirect benefit of decreasing amount of materials going to land fills.	<u>Institutional</u> <ul style="list-style-type: none">o Indirect impact on public acceptability; possibly unpopular to operators of hospital facilities due to associated costs.o Indirect impact on legal capability since requires amendment to the State Hazardous Waste Control Act (in process).o Direct impact on allocation of State Dept. of Health staff due to need to enforce the requirements.														
<u>Energy</u> <ul style="list-style-type: none">o Appropriate incineration requires more energy than landfill disposal.															
<u>Amenities</u> <ul style="list-style-type: none">o No impact.															

SOLID WASTE MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Action 18.6 Establish regulations for <u>on-site</u> disposal of hazardous waste.	Establish a permit and monitoring system for on-site disposal of hazardous waste.	State Health Dept.; BAAPCD; RWQCB; local agency.	By April 1980.	Clarification needed.	\$29,000 ^a (\$336,000 ^a 1980-2000)	\$29,000 ^a (\$336,000 ^a 1980-2000)	RCRA; State funds; Disposal fees.	Agreement to be negotiated between ABAG and State Health Dept.
Action 18.7 Ensure funding for <u>adequate enforcement</u> .	Pass State and Federal legislation to establish a stable funding source for adequate enforcement of existing regulations by State Dept. of Health and Counties.	State legislature; U.S. Congress.	As soon as possible.		\$232,000 ^a (\$2,700,000 ^a 1979-2000)	\$232,000 ^a (\$2,700,000 ^a 1979-2000)		ABAG will advocate.

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
<u>Air Quality</u> o Indirect impact on air quality since the dust and odors associated with disposal could be monitored more easily.	<u>Financial</u> o Direct Cost - Public: (Administrative and regulatory costs) State Department of Health - 1980-2000 <u>Total</u> r= 6-3/8% \$306,598 r= 10% \$219,144 (approximately \$30,000/year) BAAPCD 1980 <u>Total</u> r= 6-3/8% \$ 12,462 r= 10% \$ 11,270 RWQCB 1980 <u>Total</u> r= 6-3/8% \$ 12,462 r= 10% \$ 11,270 Counties and Cities (101) 1980 <u>Total</u> r= 6-3/8% \$ 4,075 r= 10% \$ 3,685 Institutional o Indirect impact on public acceptability; possibly unpopular to generators of hazardous wastes that use on-site disposal due to perceived costs involved. o Direct impact since the legal capability of the State Dept. of Health to require and enforce such regulations is uncertain. o Direct impact on allocation of State Dept. of Health staff due to need to develop and enforce the requirements.	<u>Direct Cost - Private</u> o Indirectly, cost of on-site disposal facility modifications. Production of Goods and Services o Employment - Indirect impact on employment, temporarily only, to install any needed facility modifications. Income and Investment o Indirect impact; capital required for any new facility modifications. Amount specific to each on-site disposal site. o Possible indirect impact on profits due to costs of compliance. Consumer Expenditures o No impact.	<u>Health and Safety</u> o Indirect impact on public health since decreases the likelihood of improper disposal of hazardous wastes. All other social impacts are same as Action 18.1.

See impacts of actions 18.1-18.6

Financial
o Direct Cost-Public:
(Administrative cost in addition to costs in recommendations 18.1-18.6)

ABAG-

1979-2000	<u>Total</u>
r = 6-3/8%	\$2,143
r = 10%	\$1,972

Department of Health

1981-2000	<u>Total</u>
r = 6-3/8%	\$2,701,227
r = 10%	\$1,885,411

Institutional
o Direct impact on legal capability since increases the chance of State and Federal legislation (or budget allocations) to establish.
o Direct impact on State Department of Health staff since funds would be available to hire additional necessary staff.

See impacts of Actions 18.1-18.6. See impacts of Actions 18.1-18.6.

SOLID WASTE MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Policy 19								
CLASS I DISPOSAL SITES AND FACILITIES SHOULD BE LOCATED SO THAT THEY DO NOT HAVE ADVERSE EFFECTS ON HUMAN HEALTH AND SAFETY, AIR AND WATER QUALITY, WILDLIFE, CRITICAL ENVIRONMENTAL RESOURCES AND URBANIZED AREAS.								
Action 19.1 Establish Class I site <u>criteria</u> .	Establish criteria for verifying the acceptability of possible Class I site areas for use by local governments.	ABAG, with assistance from counties, SSWMB and RWQCB	Ongoing.	HUD designation as regional planning agency; OMB Circular A-95 designation; Section 208-FWPCA amendments.	NA	NA	SSWMB Grants.	Plan approval ensures implementation.
Action 19.2 If additional disposal capacity for hazardous wastes is needed (see Actions 16.3 and 19.1), reserve, using zoning or other appropriate means, one or more Class I sites.	Pending the results of Actions 16.3 and 19.1, place one or more potential Class I sites in reserve status, using zoning or other means.	Affected local jurisdiction(s) (to be determined).	Ongoing.	Local zoning authority.	NA	NA	None needed at this time (contingent on Actions 16.3 and 19.1).	After plan approval, cities and counties will adopt recommendations.

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
<u>Air Quality</u> o Indirect impact; review criteria should help select site to minimize air quality problems. <u>Water Quality</u> o Indirect impact; review criteria should help select site to minimize water quality problems <u>Physical Resources</u> o Indirect impacts on flora and fauna, unique agricultural lands, mineral extraction, timber lands and recreation areas; review criteria should help select site to minimize effects on these resources. o Direct impact on solid waste management for it should affect the location on any future Class I sites. <u>Energy</u> o No impact. <u>Amenities</u> o Indirect impact on visual amenities, historic and cultural resources, and noise; review criteria should minimize harmful amenity impacts.	<u>Financial</u> o Direct Cost-Public: ABAG and county staff time to perform this study. (No estimates available--State requirements have not been developed.) <u>Institutional</u> o Direct impact on acceptability for environmental groups due to nature of the criteria. o Direct impact on County and ABAG staff since staff may be shifted from other duties to develop and review the criteria.	<u>Direct Cost-Private</u> o No impact. <u>Production of Goods & Services</u> o No impact. <u>Income and Investment</u> o No impact. <u>Consumer Expenditures</u> o No impact.	<u>Housing Supply</u> o No impact. <u>Physical Mobility</u> o No impact. <u>Health and Safety</u> o Indirect impact on public health; review criteria should help select site to minimize public health problems. o Indirect impact on site hazards; review criteria should help select site to minimize flooding, seismic risk, slope stability, and bearing material problems. <u>Equity</u> o No impact. <u>Sense of Community</u> o No impact. <u>Urban Patterns</u> o No impact.
<u>Physical Resources</u> o Indirect impacts on solid waste management; decrease rate at which existing sites are filled and should ensure future Class I site capacity. <u>Energy</u> o No impact. All other environmental impacts are same as Actions 16.3 and 19.1.	<u>Financial</u> o Direct Cost-Public: Staff time of the affected local jurisdiction to reserve site, including general plan changes and critical area rezoning. (Costs contingent upon determination of need for Class I site.) o See Action 16.3 <u>Institutional</u> o See Actions 16.3 and 19.1	Same as Action 16.3.	Same as Actions 16.3 and 19.1.

SOLID WASTE MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Policy 20								
A REGIONAL PLAN FOR LONG-TERM WASTEWATER SOLIDS MANAGEMENT SHOULD BE PREPARED AND UPDATED.								
Action 20.1 Prepare a regional plan.	Prepare a regional plan for long-term wastewater solids management as part of the regional solid waste management plan.	San Francisco Bay Region Wastewater Solids Study.	1978.	Federal Water Pollution Control Act (FWPCA) Amendments of 1972, Section 201.	\$64,000 ^a (\$752,000 ^a 1978)	0	Federal and State grants; local funds.	EPA and SWRLB will ensure implementation.
Action 20.2 Update the regional plan.	Update the regional plan as part of the regional solid waste management planning effort.	ABAG.	Continuous after Dec. 77.	FWPCA Section 208.	-	-	Federal grants.	EPA, and SWRCB, SSWMB will ensure implementation.
Policy 21								
FACILITIES FOR WASTEWATER SOLIDS MANAGEMENT SHOULD BE CONSTRUCTED IN CONFORMANCE WITH THE REGIONAL WASTEWATER SOLIDS PLAN AND THE ENVIRONMENTAL MANAGEMENT PLAN (208 PLAN).								
Action 21.1 Develop facilities plans (Step 1).	Develop facilities plans for wastewater solids management based on the regional wastewater solids plan.	Wastewater solids study will develop facilities plans for EBMUD, CCCSD, City & County of San Francisco, Cities of San Jose/Santa Clara; other wastewater agencies will develop their own facilities plans as necessary.	Dec. 78 for initial facilities plans.	FWPCA Sections 201 and 208.	\$ 78,000 ^a \$(912,000 ^a 1979)	0	Federal and State grants; local funds.	EPA and SWRCB will ensure implementation.

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
<u>Air Quality</u> o Indirect benefits since the plan will be in conformance with air quality goals and standards. <u>Water Quality</u> o Indirect benefits since the plan will meet requirements for protection of ground and surface water quality. <u>Physical Resources</u> o Direct benefits in management of wastewater solids. o Indirect benefits for surrounding ecosystems of disposal sites due to protection of surface and ground water quality. <u>Energy</u> o Indirect benefits in energy production since the plan may include site specific co-combustion projects (with refuse). <u>Amenities</u> o Indirect benefits since the plan will ensure mitigation measures for impacts related to amenities.	<u>Financial</u> o Direct Cost-Public: (Administrative and Regulatory Costs-plan development) San Francisco Bay Wastewater Solids Study 1978 \$1,800,000 (partially spent) o Fiscal Effects on Local Government- - Proposed projects included in the plan may be financed by general obligation or revenue bonds. - Property tax rate may increase slightly. - Part or all of the proposed project will be grant eligible after plan approval. <u>Institutional</u> o Implementation of regional plan may require JPA among municipal wastewater agencies. o Acceptable to wastewater treatment agencies and local solid waste management agencies. o Direct impact on involved agencies due to staff that must be reallocated to work on plan development.	<u>Production of Goods and Services</u> o The plan may recommend marketing of sludge. <u>Income and Investment</u> o Proposed projects may provide additional income and require private investment. <u>Consumer Expenditures</u> o Cost for implementing the plan will be passed on to the public. NOTE: 1. Wastewater Solids Study is doing an impact assessment that would be in much greater detail. 2. All impacts are possible, not probable. Since recommended plan alternatives for Wastewater Solids Study have not been chosen.	<u>Housing Supply</u> o No impact. <u>Physical Mobility</u> o No impact. <u>Health and Safety</u> o The plan will be in compliance with health and safety standards to reduce hazards to public health. <u>Sense of Community</u> o No impact. <u>Equity</u> o No Impact. <u>Urban Patterns</u> o The plan may help preserve marginal agricultural land from urban or suburban development.
Same as Action 20.1.	<u>Financial</u> o Direct Cost-Public: (Costs included under Action 2.1.) All other financial/institutional impacts same as Action 20.1	Same as Action 20.1.	Same as Action 20.1.
See environmental impacts for Action 21.4.	<u>Financial</u> o Direct Cost-Public: (Administrative costs of plan development) 1978 \$970,000	See economic impacts for Action 21.4.	See social impacts for Action 21.4.

SOLID WASTE MANAGEMENT PLAN RECOMMENDATIONS (continued)

RECOMMENDATIONS	GENERAL DESCRIPTION	IMPLEMENTING AGENCY (OR AGENCIES)	SCHEDULE FOR ACTION	LEGAL AUTHORITY	TOTAL COST/YEAR OF RECOMMENDED ACTION	PORTION OF TOTAL COST/YR. DIRECTLY ATTRIBUTABLE TO THIS PLAN	FINANCING MECHANISM	MEASURES TO ENSURE IMPLEMENTATION
Action 21.2 Review proposed facilities plans.	Review proposed facilities plans and approve those that are consistent with the regional solid waste management plan, and the 20 year project list in the 208 plan.	EPA, SWRCB, RWQCB, ABAG, State Clearinghouse.	1979.	FWPCA Sections 201 and 208, Office of Management and Budget-Circular A-95.	\$ 4,000 ^a (\$48,000 ^a 1978-2000)	0	Federal and State grants; local and State general funds.	Agencies will carry out existing review authorities.
Action 21.3 Design wastewater solids management facilities (Step 2).	Design wastewater solids management facilities according to the approved facilities plans.	Wastewater Agencies.	1979-1980.	FWPCA Section 201.	\$1,266,000 (\$14,800,000 ^a 1979)	0	Federal and State grants; local funds.	EPA and SWRCB will ensure implementation.
Action 21.4 Construct wastewater solids management facilities (Step 3).	Construct wastewater solids management facilities according to the approved facilities plan.	See Action 21.1.	1981-1982.	FWPCA Section 201.	\$24,800,000 (\$289,000,000 ^a 1980-2000)	0	Federal and State grants; local funds.	EPA and SWRCB will ensure implementation.

ENVIRONMENTAL IMPACTS	INSTITUTIONAL/FINANCIAL IMPACTS	ECONOMIC IMPACTS	SOCIAL IMPACTS
See impacts for Action 21.4	<u>Financial</u> <ul style="list-style-type: none"> o Direct Cost - Public: (Administrative costs of reviewing facilities plans) <u>ABAG</u> <p>1978-2000 \$400/year</p> <p><u>Reviewing Agencies (7) -</u></p> <p>1978-2000 \$3,750/year</p> <u>Institutional</u> <ul style="list-style-type: none"> o Reviewing agencies will have to allocate staff time to review plans. 	See impacts for Action 21.4	See impacts for Action 21.4.
See impacts for Action 21.4.	<u>Financial</u> <ul style="list-style-type: none"> o Direct Costs-Public: (Administrative costs of facilities design) <p>1979 \$7,000,000 (committed funds)</p> <p>1979 \$9,700,000 (funds not yet allocated - contingent on review and approval)</p>	See impacts for Action 21.4.	See impacts for Action 21.4.
<u>Air Quality</u> <ul style="list-style-type: none"> o Direct temporary impact due to increase in dust level during construction. o Direct impact due to reduction in odor problems at new processing facilities. <u>Water Quality</u> <ul style="list-style-type: none"> o Direct benefits since the construction of facilities will ensure adequate handling and disposal of wastewater solids to protect ground and surface water quality. <u>Physical Resources</u> <ul style="list-style-type: none"> o Direct benefits in solid waste management. o Direct benefits for marginal agricultural lands if sludge is used for land application. <u>Energy</u> <ul style="list-style-type: none"> o Direct adverse impact due to energy required for facilities construction and operation of facilities. <u>Amenities</u> <ul style="list-style-type: none"> o Direct temporary, adverse impact due to noise associated with facilities construction. o Indirect adverse impact due to potential noise problems associated with operation of equipment at the facilities. 	<u>Financial</u> <ul style="list-style-type: none"> o Direct Cost-Public: (Costs of facility construction) <p>1980 \$70,000,000 (funds committed)</p> <p>1980 \$97,000,000 (funds contingent upon review and approval)</p> <p>(Costs of operation and maintenance)</p> <p>1981-200 \$16,700,000/year</p> <ul style="list-style-type: none"> o Fiscal Effects on Local Governments - Facilities construction may be financed by general obligation or revenue bonds. - Property tax rate may increase slightly. - Federal and State grants may be available (up to 87½% of the construction cost). <u>Institutional</u> <ul style="list-style-type: none"> o Facilities construction may require JPA or other agreements among wastewater management agencies and other public agencies. o Facilities construction may be viewed positively by wastewater management agencies and the public. 	<u>Production of Goods and Services</u> <ul style="list-style-type: none"> o Employment - Temporary and permanent increase in employment due to construction and operation of facilities. <u>Income and Investment</u> <ul style="list-style-type: none"> o Land application of sludge may require private investment, and marketing of sludge would require private investment. <u>Consumer Expenditures</u> <ul style="list-style-type: none"> o Cost for facilities construction will be passed on to the public. 	<u>Housing Supply</u> <ul style="list-style-type: none"> o No impact. <u>Physical Mobility</u> <ul style="list-style-type: none"> o No impact. <u>Health and Safety</u> <ul style="list-style-type: none"> o Construction of the needed facilities will improve the handling and disposal of sludge (thereby reducing health and safety hazards). <u>Sense of Community</u> <ul style="list-style-type: none"> o Potential impact if odors or other nuisance or health problems accompany a facility. <u>Equity</u> <ul style="list-style-type: none"> o No impact. <u>Urban Patterns</u> <ul style="list-style-type: none"> o If the facilities could facilitate land application of sludge, it may have indirect, minor benefits for preserving marginal agricultural land.

APPENDIX 1

Senate Bill No. 424

CHAPTER 689

An act to add Section 66780.5 to the Government Code, relating to solid waste management.

[Approved by Governor September 8, 1977. Filed with Secretary of State September 8, 1977.]

LEGISLATIVE COUNSEL'S DIGEST

SB 424, Nejedly. Solid waste management.

Under existing law each county is required to prepare a comprehensive, coordinated, solid waste management plan consistent with state policy and any appropriate regional or subregional solid waste management plan.

This bill would require the Association of Bay Area Governments to prepare a regional solid waste management plan for the San Francisco Bay Area to be based primarily on county solid waste management plans approved by the State Solid Waste Management Board.

The bill would also provide that, notwithstanding Section 2231 of the Revenue and Taxation Code, there shall be no reimbursement pursuant to that section nor any appropriation made by this bill for a specified reason.

The people of the State of California do enact as follows:

SECTION 1. Section 66780.5 is added to the Government Code, to read:

66780.5 A regional solid waste management plan shall be prepared and updated by the Association of Bay Area Governments for the San Francisco Bay Area, as defined by the Office of Planning and Research pursuant to Section 65040.4. The regional plan shall be developed in cooperation with all affected local jurisdictions, and shall be based primarily on county solid waste management plans submitted to and approved by the board pursuant to this chapter. The regional plan shall address only those regional issues identified by local governments in the county solid waste management plans. Policies and programs for regional solid waste management shall be consistent with the state policy to protect the public health, enhance the environment and conserve its natural resources, as adopted by the board pursuant to Section 66770 of this chapter. Regional programs and policies shall not include aspects of solid waste handling that are primarily the responsibility of local governments, as defined by Sections 66732 and 66771. In order that the provisions of Sections 66701 and 66770 of this chapter are carried out to the maximum feasible extent, the regional plan shall be consistent with the San Francisco Bay Area air quality maintenance plan prepared

APPENDIX 1 (continued)

Ch. 689

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and revised pursuant to the Federal Clean Air Act of 1970, as amended, and shall be consistent with the areawide waste treatment management plan prepared and revised pursuant to Section 208 of the Federal Water Pollution Control Act, as amended. The regional plan, and subsequent amendments thereto, shall be submitted to the general assembly of the association. Once approved in such assembly by a majority of the counties representing a majority of the population of the San Francisco Bay Area, and in such assembly by a majority of the cities representing a majority of the population of incorporated areas in the San Francisco Bay Area, the regional plan shall be submitted to the board for approval. Submission of the initial plan shall be made in April 1978, together with the areawide waste treatment management plan to be submitted to the State Water Resources Control Board and the air quality maintenance plan to be submitted to the State Air Resources Board. Hazardous waste policies and programs of the regional plan shall be submitted to the State Department of Health for approval. The regional plan shall, upon approval by the board and the State Department of Health, become part of the state plan to meet the requirements of the Federal Resource Conservation and Recovery Act of 1976. In carrying out the obligations of this section, the association shall comply with applicable guidelines and regulations of the board, the State Air Resources Board, the State Water Resources Control Board, and the State Department of Health. Nothing in this section shall preclude a local government from entering into a contract with the board for a solid waste management or resources recovery project consistent with state law.

SEC. 2. Notwithstanding Section 2231 of the Revenue and Taxation Code, there shall be no reimbursement pursuant to that section nor shall there be any appropriation made by this act because this act is in accordance with the request of local government entities that desire authority to carry out the programs specified in the act. This act also affirms for the state activities that are already in existence and funds for such activities are provided by the federal government under the Federal Water Pollution Control Act, as amended. The association shall also use any other available federal funds for which it is eligible, including those provided under the Federal Resource Conservation and Recovery Act of 1976 if designated by the Governor to receive such funds.

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APPENDIX 2. SYNOPSIS OF SOLID WASTE MANAGEMENT PLAN ADVISORY COMMITTEE MEETING OF SEPTEMBER 29, 1977

<u>PAGE NO. OF DRAFT PLAN</u>	<u>COMMITTEE COMMENTS</u>	<u>STAFF RESPONSES</u>
Page 2	In reading the Bay Area Solid Waste Management Project (BASWMP)-Phase I Report and this draft plan, it is confusing as to who has responsibility for solid waste management planning in the Bay Area. There may be duplication of effort. There should be a clarification of the relationship between the State SWMB studies and ABAG's solid waste management plan. (T. Brennan)	The State SWMB has supported ABAG's role in preparing a solid waste management plan for the Bay Area. Under BASWMP, the State SWMB will assist local governments to implement specific programs. These programs would be consistent with the regional and local plans.
Page 2	An environmental impact document should be prepared and economic impact should be discussed. (A. Campodonico*)	An environmental impact document will be prepared for the Environmental Management Plan and economic impact of the plan will be discussed.
Page 2	All the affected parties should be notified. (A. Campodonico*)	The draft Environmental Management Plan will go through an extensive public review and comment process. Public notice will be given.
Page 2	ABAG should get the Solid Waste Management Plan Recommendation to local solid waste management agencies as soon as possible. (B. Croly)	ABAG will make draft plans available to all interested parties, and will make presentations whenever requested.
Page 2	At the beginning of the plan, the language seems to be slanted to imply that problems are not being solved. The plan should recognize the fact that a lot is being done and that the private sector plays an important role. (F. Boerger)	Pages 6-7 describe the previous and concurrent planning and programs. The summary description of the county plans on pages 20-22 recognizes the important role of the private sector. A table will be added in the December draft of the plan, showing ongoing projects at state & local levels.
Page 2	The general objectives for municipal waste management should be included as they have been for hazardous waste. (A. Parkinson)	The specific objectives on page 4 have been revised.
Page 3	It is not clear how ABAG came up with the \$850,000/year figure. From the point of view of a tax payer, this figure is not inexpensive. (F. Boerger ; H. Simonsen)	A more detailed description about the cost estimates has been added on page 34. The statement about the plan being relatively inexpensive has been deleted.
Page 4	One of the goals of the program should be to include and implement local goals and policies. (B. Croly)	The specific objectives on page 4 have been revised.
Page 4	Large scale technology should be mentioned in the specific objectives. (R. Spitzka)	Specific objectives on large scale technology can be added in the December version of the draft plan after ABAG staff has met with State SWMB staff.
Page 4	The legal mandates for preparing the regional solid waste management plan should be elaborated. (L. Devincenzi)	The legal mandates for preparing the plan include Section 208, Public Law 92-500 and Section 66780.5 of the California Government Code. A brief summary of the above mandates is presented on pages 4-6 SB 424. Section 66780.5 of the California Government Code is attached as Appendix 1.

* Additional industrial representatives (non-Committee members) invited by ABAG staff to comment on the draft plan.

APPENDIX 2. (continued)

<u>PAGE NO. OF DRAFT PLAN</u>	<u>COMMITTEE COMMENTS</u>	<u>STAFF RESPONSES</u>
Page 5	ABAG is doing regional solid waste planning based on the county plans to 1980. Section 66780.5 of the California Government Code does not specify the time frame. Therefore, ABAG should support the county plans in general beyond 1980. (J. Cutler)	See pages 28-29 for other options not included in the plan.
Page 5	A large percentage of tonnage of hazardous wastes is water. Therefore, the projected quantities are misleading. We might not have industry here by 1990 at the rate these regulatory agencies are going. How can ABAG assume that the production of hazardous waste will double by 1980-1990. (H. Simonsen)	A footnote for Table 2 (page 10) has been added to indicate that residues requiring land burial after evaporation are only a very small proportion of the liquid waste. Assumptions for estimating the future hazardous waste quantities are discussed in Solid Waste Tech. Memo No. 6 dated June, 1977.
Page 10	Another table should be prepared to indicate the projected waste quantities as a result of waste reduction. (A. Campondonico*)	The goal of the State SWMB is 25% per capita reduction of wastes going to landfills by 1980. However, it would be difficult at this time to estimate the effectiveness of the recommended actions on waste reduction.
Page 15	Recovery of energy from waste should be mentioned. (R. Spitzka)	The examples deal only with materials to be reused in the same form. Energy recovery converts wastes to a new form.
Page 13	Co-disposal of sludge and refuse using energy recovery systems should be identified as an issue. (R. Spitzka)	This has been added to Table 3.
Page 18	Should include more specific programs for waste reduction	These programs are described in the plan recommendation table (Table 6).
Page 18	There should be some mention of ongoing projects, perhaps a table should be added. (B. Croly)	Pages 6-7 describe the previous and concurrent planning and programs. However, a table can be added in the December draft of the plan.
Page 18	The State will enforce regulations and will bill the county if no enforcement agencies are designated within the county. (J. Siri)	This is not applicable in the Bay Area since enforcement agencies for the counties have been designated.
Page 25	The following changes should be made: Facilities plans will be developed for the four major agencies after the completion of the regional wastewater solids plan in December, 1977. (P. Winnicki)	These changes have been made.
Page 28	The county plans do not deal with solid waste management on a regional basis. The draft solid waste management plan should consider regional and sub-regional systems. (J. Siri)	See page 28 for other options not included in the Plan.
Page 28	The franchise agreement for waste collection does not always specify the disposition of the collected wastes. (J. Siri)	The wording of the sentence has been changed.
Page 28	EBMUD could be involved in solid waste management in Alameda and Contra Costa Counties. The plan should recognize this fact. (J. Siri ; B. Croly)	A sentence has been added to recognize this fact.

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APPENDIX 2. (continued)

<u>PAGE NO. OF DRAFT PLAN</u>	<u>COMMITTEE COMMENTS</u>	<u>STAFF RESPONSES</u>
Page 28	It is questionable that collection is inseparable from processing and disposal of wastes. (R. Spitzka)	The wording of the sentence has been changed.
Pages 31-69	The policies are acceptable, but there are problems with the financing, measures to ensure implementation, and the impact assessment columns. For example, the assumptions for the cost figures were not included. (J. Cutler)	Table 6 will be revised.
Pages 31-69	A number of times no impact appears when there would be air quality impacts, consumer costs, other indirect effects. (B. Straubs*; F. Boerger)	See above.
Pages 31-69	The general 21 policy statements are fine, but in Policies 5 to 21 there are specific problems. (R. Spitzka)	See above.
Pages 31-69	The assessment of the air quality impact is unclear. (T. Brennan)	See above.
Pages 31-69	The economic impact of the recommendations very often falls on the private sector. There should be another means of financing the charges. (L. Devincenzi).	Many of the recommended actions in fact would result in Federal and State financing of programs.
Pages 31-69	Only the description of the plan and the policies should be forwarded to EMTF on October 12. Staff should revise the assessment of the plan recommendations before it is presented to EMTF. (A. Campodonico*)	See comments below.
Pages 31-69	It is important that EMTF get the entire packet to know more about the proposed programs. (A. Parkinson)	Staff concurs.
Page 32	The annual cost for carrying out the county plans was estimated to be \$215 million. It is not clear how the cost was estimated. (R. Spitzka)	ABAG staff will meet with State SWMB staff to go over the documentation of cost estimates.
Page 34	Action 3.1 is too passive. There is an absence of policy on energy recovery. (R. Spitzka)	Policies and actions on large scale technology can be added in the December version of the draft plan after ABAG staff has met with State SWMB staff.
Page 34	The regional plan should emphasize integration of the county plans to ensure optimum placement of facilities, e.g., transfer stations. (A. Parkinson).	This emphasis will be added.
Page 34	The coordination of solid waste management facilities should be done by one agency. (T. Gerow)	Staff concurs.
Page 34	Action 3.1 appears to add more agencies in the review process and may result in more delays. (D. Phelan*)	The affected agencies have the legal mandate to review the projects.

* Additional industrial representatives (non-Committee members) invited by ABAG staff to comment on the draft plan.

APPENDIX 2. (continued)

PAGE NO. OF
DRAFT PLAN

COMMITTEE COMMENTS

STAFF RESPONSES

Page 36	It is not clear how the costs for Actions 4.1 and 4.2 were estimated. (R. Spitzka)	ABAG staff will meet with State SWMB staff to go over the documentation of cost estimates.
Pages 38-43	The SSWMB has a statewide role for issuing permits. The SSWMB is concerned about the duplication of effort. The plan should recognize the Board's role in implementation of Policies 5 to 10. (R. Spitzka).	The State SWMB has a role in statewide coordination to support regional streamlining.
Pages 38-43	According to AB 1593, only the State Department of Health and local Health Departments have the authority to write permits for handling, processing, storing and disposal of hazardous wastes. The State Health Department is coordinating the activities for issuing those permits. (H. Collins)	The State Department of Health is only coordinating the permits for hazardous wastes. There are other permits or requirements issued by BAAPCD, RWQCB, U.S. Corps of Engineers, BCDC, local governments, etc.
Pages 38-43	Policies and actions for streamlining permit approval process could be consolidated. (A. Parkinson ; S. Clark)	They may be consolidated in the December version of the draft plan.
Pages 38-43	Policies 5 to 10 tend to confuse more than simplify the permit approval process, especially if another agency becomes involved. (F. Boerger)	The intent is to simplify the permit approval process.
Page 44	Policy 11 may impact on the SSWMB's policy on public education and waste reduction with regard to SB 650 and RCRA. (R. Spitzka)	ABAG staff and State SWMB staff will meet on this matter.
Page 46	The development of markets for secondary materials should be a high priority item, and \$400 per year for implementing Action 13.1 would be too low. (L. Burnett)	Cost estimates can be revised in the December version of the draft plan.
Page 46	Action 13.1 should be changed to read "Contact potential buyers for source separated materials!" (A. Parkinson)	The change has been made.
Pages 46-49	The "no impact" statements in the assessment of Actions 12.1, 14.1, and 14.2 are incorrect. (L. Eisele*)	Table 6 will be revised.
Pages 46-49	Policies 12 and 14 are huge bag of worms. Having State and Federal legislatures regulate something like the design of cardboard boxes is unwise. It would put artificial impact on the industries and would alter the supply and demand. Taxing mechanism should be used instead. Products with excess packaging should be taxed. (D. Carrier*)	Recommended actions may be revised to include the taxing mechanism. The other approach would still be necessary.
Page 47	For Action 12.1, under economic impact-consumer expenditures-there would be a probable instead of possible increase in cost of some products. There would be impacts on air and water quality and energy. (L. Eisele*)	The changes will be made.

* Additional industrial representatives (non-Committee members) invited by ABAG staff to comment on the draft plan.

APPENDIX 2. (Continued)

PAGE NO. OF
DRAFT PLAN

COMMITTEE COMMENTS

STAFF RESPONSES

Page 48	Policy 14 should read "Federal, state, and <u>local</u> governments..." (A. Parkinson)	The change has been made.
Page 48	Action 14.2 would duplicate the effort of the state. (R. Spitzka)	The State has adopted preferential purchasing policies. The local governments should do the same.
Page 48	For Action 14.1, the impact of reducing the price of secondary materials seems to conflict with the goals of Policy 13. (L. Eisele*)	There is no conflict. Action 14.1 would improve the competitive positions of the secondary materials such as reducing the transportation cost of the secondary materials. Improving the competitive position could also involve raising the prices for virgin materials.
Page 50	The plan should include a description of existing source separation programs funded by the SSWMB. (R. Spitzka)	A brief description has been added on Page 6. A table with a more complete description of state and local programs will be included in the December draft.
Page 50	Large-scale energy recovery systems were not included in the plan. (R. Spitzka)	Additional policies on large-scale energy recovery systems will be added.
Page 52	The State Department of Health will receive a \$40,000 grant from the SSWMB to conduct county-by-county hazardous waste surveys in the Bay Area. The State Health Department needs at least another \$40,000. In comparison with these costs the estimates for Action 16.1 were too low. (H. Collins)	The total cost for the surveys was estimated to be \$75,000.
Pages 52-65	SB 1593 will take care of many of the problems identified in the plan. (H. Simonsen)	ABAG staff will review SB 1593 and integrate the provisions of this new act into the plan.
Pages 52-65	There should be a clarification of what materials are classified as hazardous waste and under what circumstances. This classification affects the handling and disposal of wastes. (T. Gerow ; T. Brennan)	EPA will provide guidance on this under RCRA.
Pages 52-65	ABAG staff should review SB 1593 and integrate the provisions of this new act into the plan. (H. Collins)	ABAG staff will do so.
Pages 52-65	ABAG staff should meet with State Department of Health staff to discuss comments in detail. (H. Collins)	ABAG staff will do so.
Page 54	Cost estimate for Action 17.1 was too low. (H. Collins)	Cost estimate may be revised in the December version of the draft plan.
Page 54	Development of central processing plant for hazardous wastes should be considered under actions for Policy 17. (R. Spitzka)	See Action 17.4 on page 58.
Page 54-56	Use a stronger word than encourage in the Actions under Policy 17. (B. Croly)	There is no legal mandate to require industries to reduce or recover hazardous wastes.
Page 64	Certain tasks related to recommended actions for Policy 19 could be done by SSWMB staff. (R. Spitzka)	So noted.

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APPENDIX 2. (continued)

<u>PAGE NO. OF DRAFT PLAN</u>	<u>COMMITTEE COMMENTS</u>	<u>STAFF RESPONSES</u>
Page 66	The Union Carbide co-disposal system for refuse and sludge should be considered in the Wastewater Solids Plan. (R. Spitzka)	The Wastewater solids plan will examine all alternatives.
Page 67	There would be no real benefits to air quality resulting from the implementation of Actions 20.1 and 20.2. (P. Winnicki)	There will be indirect benefits.
Page 68	EPA and SWRCB cannot ensure implementation of wastewater solids management facilities. They only provide grant funds. (P. Winnicki)	EPA and SWRCB can enforce NPDES permit requirements to ensure implementation.
APPENDIX	SB 424 should be included in the appendix. (B. Croly)	SB 424 has been included.

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